

ANNUAL REPORT

MADE TO THE

URBAN SANITARY AUTHORITY

OF THE

BOROUGH OF LEEDS,

FOR THE YEAR

1895,

AND FIRST QUARTER OF 1896.

BY

J. SPOTTISWOODE CAMERON,

M.D., B.Sc., &c.,

Medical Officer of Health to the Borough.

WITH SUPPLEMENTARY MATTER.

Leeds :

GOODALL & SUDDICK, PRINTERS AND LITHOGRAPHERS, COOKRIDGE STREET.

1896.



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1894-95.

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The preliminary report for 1895 was submitted to the Sanitary Committee on the 4th of June, 1896, and along with the tables (now printed in part IV. and the appendix) forwarded to the Local Government Board in the usual manner. The letterpress of this preliminary report will be found in the first 22 pages of this enlarged and supplementary report.

Other portions of this report were submitted to the Sanitary Committee from time to time during the year, but are now collected, along with the complete tables, into one, for convenience of reference.

The issue of the complete report has been delayed owing to the illness of the writer, and the list of reports and recommendations, generally printed as part V., has been left out, having been included in the "Preliminary Report for 1896," presented to the Sanitary Committee on the 11th February, 1897.

J.S.C.

REPORT

OF THE

Medical Officer of Health.

For the Fifty-two Weeks ended December 28th, 1895.

MUNICIPAL BUILDINGS,

LEEDS, *June 4th*, 1896.

To the Chairman of the Sanitary Committee.

SIR,

Though I cannot, as last year, report to you that the death-rate (20·5) in Leeds for the year 1895, has been the lowest on our record, I am yet able to point out that with three recent exceptions it is the lowest since 1864, when the Registrar-General commenced printing our death-rates. I shall have, however, to go into some detail, and for that purpose shall, so far as possible, adopt the divisions of recent reports.

Population.—The population of Leeds, at the middle of 1895, is estimated by the Registrar-General at 395,546. Upon this number our death-rate is calculated by him as 20·5. There is, however, reason to think the estimate of the Registrar-General may be really below the actual population. The yearly increase of population, from 1871 to 1881, was at the rate of 1·748 per cent. per annum. From 1881 to 1891, it was at the rate of 1·745, and the population just given is estimated upon the continuance of the latter rate of increase. The increase in the number of houses rated to the poor, since the census, has been at the rate of 2 per cent. per annum. This rate is obtained as follows.

For the purpose of ascertaining the comparative increase in the various wards and districts of the town, through the courtesy of Mr. Derry, the City Accountant, we have been enabled to examine the rate books of 1890-1 and 1894-5. The number of houses rated in the city, in the year 1890-1, was 80,118; the number, four years later, in 1894-5, was 86,730. That is to say, in these four years the number of houses rated has increased at the rate of 2 per cent. per annum, while the Registrar-General only estimated the population to have increased $1\frac{3}{4}$ per cent. per annum. If the population has increased at the same rate as the houses, it would be, at the middle of 1895, 399,811, instead of 395,546, and the death-rate for the current year, upon the Registrar-General's figures, 20·3, instead of 20·5. It is better, however, to continue to use the method adopted by the Registrar-General, always remembering that it is possible that the population may have been underestimated.

The reasons that our death-rate has not kept down to the low level recorded for 1894 are not far to seek, but these will be best studied in detail by taking into consideration the health of the several quarters of the year.

HEALTH IN THE SEVERAL QUARTERS.

Conditions antecedent.—The year 1894 had been the healthiest on record. The mortality in its several quarters had been at the annual rate of 18·7, 16·4, 16·3, and 20·1 respectively per 1,000 of the estimated population, the last quarter having had the highest death-rate; though the highest for the year it was yet below the average of the corresponding periods of previous years.

Fourth quarter, 1894.—The average mortality for the fourth quarter for the five years 1890-94 was 20·5 per 1,000 per annum, it having been 21·9 in 1890, 20·4 in 1891, and 20·1 and 20·0 respectively in 1892 and 1893. During the third quarter of 1894 our autumnal death-rate from diarrrhœa had been so low as 1·3 against 3·6 in the third quarter of the ten preceding years, and the rate from lung diseases, other than consumption, was 2·4. While the diarrrhœa rate, as was to be expected, dropped still further in the fourth quarter to 0·34, the death-rate from measles increased from

0·24 in the third to 2·68 in the fourth quarter, and from non-tuberculous lung diseases to 4·31. The increased mortality in the latter group was chiefly as shown in the report quoted* amongst children under five whose mortality per 1,000 living at that age rose from 9·49 in the third to 20·29 in the fourth quarter. It was therefore chiefly owing to the outbreak of measles that our death-rate in the fourth quarter of 1894 came nearly up to the average of the corresponding period of the five years of which it formed the last, and quite up to the average of the fourth quarters of 1892-4.

First quarter, 1895.—In the first quarter of 1895, lung diseases (including influenza) were still able to cause 7·62 deaths per 1,000 of the estimated population. During the 13 weeks no fewer than 82 (=0·83 per 1000) deaths were recorded from measles, though, with the exception of whooping-cough, which killed 20, the other of the commoner zymotics were not so much in evidence. If diphtheria and membranous croup be included, as is now done by the Registrar-General under one heading, as in Table F, the deaths for the first quarter of 1895 amount to 24; 14, as will be seen from Table C, ascribed to diphtheria, 11 to membranous croup.

Eight cases of small-pox, 145 of scarlet fever, 39 of diphtheria, 15 of membranous croup, 16 of typhoid, 1 of “continued,” and 4 of puerperal fever, 80 of erysipelas, and 18 of other diseases were reported; in all 326, and of these 107 were treated in your hospital.

During the last quarter of 1894, the average temperature had been 47·49° F.; during the first quarter of 1895 it was only 36·84° F.† The average of the thirteen observations made during the week was below the freezing point in the second and fifth weeks of January, and in the first and second weeks of February; after which, during the month of March, the average temperature, with the exception of the first week, kept above 40° F. These figures, however, though the average of the dry-bulb readings do not represent the real mean

* Annual, 1894, page 24, Table 6b. † These are the dry-bulb temperatures given in line 31, table F, and are the averages of those taken on the top of the Philosophical Hall, at 10 a.m. every day, and at 4 p.m. every day except Sundays and certain holidays.

temperatures. The mean of the lowest readings for the quarter was $30\cdot74^{\circ}$ F. It averaged $28\cdot60^{\circ}$ F. in the five weeks of January; $26\cdot75^{\circ}$ F. in the four weeks of February; and $37\cdot39^{\circ}$ F. in the four weeks of March. This severe cold was all the more trying in the early part of the year from the absence of snow. It is not, therefore, surprising that the death-rate from lung diseases, which (probably chiefly on account of the prevalence of measles) had averaged 4·31 in the thirteen weeks of the last quarter of 1894, instead of falling when this disease disappeared from our midst, rose to an average of 5·28 in the five weeks of January; 6·56 in the four weeks of February; and to the still higher average of 11·61 in the four weeks of March. If the deaths from influenza be deducted the rates for these months were 5·25, 6·53 and 9·53 respectively.

While the mean ten and four o'clock observations, on the temperature of the air in Park Row, averaged $36\cdot8^{\circ}$ F., the mean of the highest and lowest observations averaged $35\cdot4^{\circ}$. The highest daily temperatures averaged less than 40 in each of the seven earlier weeks in the quarter. In the third week of February (that is the eighth of the quarter), the average highest readings were 41° . They rose to an average of 43° the following week, fell to $41\cdot7^{\circ}$ in the first week of March, rose to $51\cdot3^{\circ}$ in the second, and to $55\cdot3^{\circ}$ in the third, falling a little to an average of $48\cdot1^{\circ}$ in the concluding week of the quarter.

The death-rate from all causes in the first quarter of 1895 was 24·7 per annum per 1,000 persons living, which, although below that of the 33 large towns (25·2), was considerably in excess of the unusually favourable rate (18·7) which obtained in the first quarter of 1894, the difference being, as already hinted, chiefly due to the increased severity of the weather.

Second quarter, 1895.—During the second quarter the death-rate dropped to 17·5, that of the large towns being a little higher, 17·8. The death-rate from lung diseases, other than consumption, which had been 7·62 in the first quarter, fell to 4·00. The mortality from measles, which had been 2·68 per 1,000 per annum in the fourth quarter of 1894, and 0·83 in the first quarter of 1895, fell still further to 0·12 in the quarter we are now considering. Thirty-five deaths in the quarter were ascribed to influenza, against

65 in the first quarter: equivalent to 0·35 and 0·66 deaths per 1,000 respectively. The birth-rate, which had been 33 in the first quarter, against 25·2 in the large towns, fell to 32·2 in the second, against 31·5 in the large towns.

While the barometer stood fairly high, averaging 29·86, the average observed temperature was more than 20 degrees above that of the preceding quarter. The average of the highest and lowest readings was also 62·4° F., and 45·4° against 40·1°, and 30·7° in the preceding quarter, giving an uncorrected mean temperature of 53·9° for the quarter. The average of the ten and four o'clock readings at Park Row was 57·9°.* The moisture in the air was very much less than in the entire quarter, averaging only about $63\frac{1}{4}$ per cent. of saturation, and the daily range of the thermometer was greater, averaging nearly 17 degrees. The rainfall was less than 5 inches. As a whole, therefore, the second quarter was warmer, less changeable, and the air much drier. On the other hand, during eight out of the thirteen weeks, the wind had more or less of an easterly direction.

Third quarter, 1895.—In the third quarter the barometer again had an average of about 29·8 inches. The average observed temperature was 64° F., and the humidity only 67. The mean of the highest readings was 69°, and of the lowest 53°. The daily range averaged a little under 16°. The total rainfall in the thirteen weeks was no less than 10 inches; the greater part of this (7 inches) fell in the five weeks of July, 1·77 in the four weeks of August, and 1·13 in the remaining four weeks of September. As compared with the preceding quarter, the third had therefore a heavy rainfall, but as just seen, the rain predominated in the earlier part of the quarter. Notwithstanding this large amount of rainfall, the humidity of the atmosphere was not great. This was consequent chiefly upon the high temperature.

* The mean (uncorrected) temperature of the thirteen weeks, derived from maximum and minimum observations was 53·93°. If the correction for hour of observation and seasonal range be made for the four sets of observations in the thirteen weeks we get a mean temperature of 53·5° F. The Registrar-General's return for the calendar quarter is 52·8. In the previous or first quarter our own corrected average for the thirteen weeks was 34·2; the Registrar-General's for the calendar quarter 35·1.

Diarrhœa, which had accounted for 27 deaths in the second quarter of the year, accounted for no fewer than 489 in the third, the number of deaths in no one week having been so low as in the whole thirteen weeks of the previous quarter. In the week ending June 29th, the last of the second quarter, the deaths registered from diarrhœa were 7; the following week, July 6th, they rose to 28, were 40 in the second, and 57 (the maximum in the quarter) in the third week; they then fell to 46, 33, and 32. In the weeks ending 17th and 24th of August, they were 33 and 32 respectively, rose to 37 in the last week of August, were 34 in the first week of September, and rose again to 42 in the second, falling to 37 and 38 in the two following weeks. This matter of diarrhœa I shall probably have to treat at greater length in a supplement to this report.

The mortality of the quarter from all causes was 21·04, as against 17·47 in the previous quarter, and 16·34 in the corresponding quarter of 1894. The increase was chiefly due to diarrhœa, and was chiefly amongst young children.

The mortality over five in the third quarter of 1894 was 9·95, in the third quarter of 1895 10·3; under five, the mortality was 61 per 1,000 in 1894, and 96 in 1895. Amongst infants under one, the mortality in the third quarter of 1894 was 184 for every 1,000 births registered; during the corresponding quarter of 1895 it was 296, and of the 907 deaths of children under one, which made up this heavy rate of infantile mortality, 388 were due to diarrhœa. If we except, therefore, the heavy death-rate from diarrhœa, 4·96 to be referred to later, the quarter may have been regarded, as on the whole, a healthy one.

Fourth quarter, 1895.—In the fourth quarter of 1895, on the other hand, the death-rate was the lowest that it has been my duty here to put on record. My first report to you was on the last quarter of 1889, when the death-rate was 22·5. In the following years it was 21·9, 20·4, 20·1, 20·0, and 20·1, giving an average for the six years of 20·8. During the corresponding quarter of 1896 the rate was 19·0, approaching two per 1,000 below the average of the six years. It may be added here that our death-rate in the fourth quarter of 1895, of 19·0 per 1,000, was the lowest recorded

during the nineteen years, as to which our statistics for this quarter are available. During the years 1886 and 1889 the average death-rate in the fourth quarter in Leeds was 22·5, the lowest having been 21·3 in 1887.

In the third quarter the weekly deaths from diarrhœa had averaged nearly 38. In the first week of the fourth quarter they fell to 24. They stood at 22 the week after. They fell in the third week of the quarter to 15, in the fourth to 10, and in the fifth (the last week of October) to 1. There were 15 such deaths in the four weeks of November, and 5 in the last four of the year.

Although diarrhœa had thus greatly diminished, typhoid fever, which had caused 22 deaths in the third quarter, 9 of them in the last four of the 13 weeks, had become somewhat prevalent. It caused 3, 3, 4, 7, and 6 deaths respectively, altogether 23; in the five weeks of October, 4, 2, 6, and 3, together 15 in the four weeks of November, and 3, 4, 4, and 2, together 13 in the four concluding weeks; making altogether, in the fourth quarter, 51 deaths from this cause. The cases of this disease reported, which, during the four weeks of September, were 9, 13, 27, and 24, were 20, 12, 30, 32, and 25 in the five weeks of October; during November they were 26, 20, 21, and 17 respectively, falling in December to 11, 15, 9, and 7.

First quarter of 1896.—As the Council wish this Report brought up to the end of the March quarter, it may be added here that the death-rate for the first quarter of 1896 has been 18·7; the corresponding rate for the first quarter of the years 1887-90 was 23·5, the lowest of these years having been 1888, with a rate of 21·0; the corresponding rate for 1891 was 24·3, it was 21·7 in 1892, 24·3 in 1893, 18·7 in 1894, and last year, 1895, 24·7.

MORTALITY FROM CERTAIN GROUPS OF DEATH CAUSES IN 1895 AND SOME PRECEDING YEARS.

All causes.—The year 1895, although less favourable as to its death-rate than its predecessor, had a rate of 0·56 per 1,000 living below the average rate of the five years which preceded it; which five years included, by the way, the two healthiest years on record. The death-rate was also 0·61 below that of the five years, 1885-89.

With the exception of the two years named (1892 and 1894), only one other year (1885) had so low a death-rate, although that of 1888 was within a decimal point of it. With the exception of these four years, no other year of the previous thirty had a death-rate below 21.

Seven zymotics.—From the seven zymotic diseases the death-rate was 2·65, or nearly 13 per cent. of the total mortality. This figure, however, is in excess of the rate for the preceding year, when the rate from this group had been 1·98. It is also in excess by 0·14 of the rate for the five years 1890-94 inclusive, but it was nearly the same amount (0·13) below the rate for the five previous or “pre-influenza” years.

Dividing the five years, 1890-94, into two groups—the two influenza years, 1890-91, and the three later years, 1892-3-4, the healthiest triennium on record—it will be found that the death-rate

TABLE 1.

Annual deaths per 1,000 of the estimated population.

	All causes.	Seven zymotics.	Consumption.	Bronchitis, pneumonia, pleurisy.	Other lung diseases, without influenza.
Five years, 1885-89) 261 weeks	21·16	2·78	1·70	3·93	0·27
Five years, 1890-94) 261 weeks	21·11	2·51	1·61	4·42	0·31
1890-91 ...	22·81	2·40	1·72	5·29	0·32
1892-3-4 ...	20·00	2·57	1·54	3·85	0·30
Year 1895 ... 52 weeks	20·55	2·65	1·55	3·81	0·24
1895 increase on '90-4	...	0·14	...	...	...
„ decrease „ '90-4	0·56	...	0·06	0·61	0·07
1895 increase on '85-9	...	...	...	...	...
„ decrease „ '85-9	0·61	0·13	0·15	0·12	0·03

from this group, which had been 2·78 in the five pre-influenza years, fell to 2·40 in the years 1890-91, but rose, slightly, to 2·57 in the three years of the specially healthy triennium, and last year it was slightly (0·08) in excess of that of the triennium, and rather more so (0·25) of that of the three years that preceded. In the triennium (1892-4), the death-rate from measles had been 0·62. It was 0·35 in 1895. From scarlatina it had been 0·14, and was 0·13 in 1895. From diphtheria it had been 0·13, and was 0·10 in 1895. From whooping-cough it had been 0·40. It was 0·29 in 1895. From the group of continued fever it had been 0·20, but was 0·22 in 1895. From diarrhœa it had been 1·05 in the triennium. It rose to 1·58 in 1895, or half as high again. It is therefore slightly to fever, but chiefly to diarrhœa, that our death-rate from this group figures less favourably than in recent years. With the exception of these two members of the group, the rates were lower in 1895 than the average rates of the three preceding and specially healthy years, and I purpose, in the latter part of this report, should time permit, to give you some further information as to the local conditions which favoured these two deadly zymotic ailments.

Phthisis.—The most important of all the infectious diseases, consumption, has shown of later years a steady tendency to decrease. In the five pre-influenza years (1885-9) the death-rate from this cause was 1·70. In the five following years (1890-4) it was 1·61. Dividing the latter group of five years again into the two groups, in the earlier one consisting of the two years, 1890-91, it was 1·72, while in the other, consisting of the three later years which I have distinguished as the specially healthy triennium it was 1·54. The year 1895 had a rate of 1·55, which, although nominally (0·01) in excess of the rate for the specially healthy triennium, 1892-3-4, was 0·17 below the rate for the two years which preceded them, and 0·15 below the average rate of the five pre-influenza years, 1885-9.

It has, however, to be remembered in comparing the rate last year with that of the triennium, 1892-3-4, that in 1892 and 94, the rates had been 1·42 and 1·49 respectively, and that the average of the triad had been raised by the heavier rate, 1·70, of 1893. This

rate, however, was below the average of the two preceding years, and was identical with the rate obtaining in 1895-9.

Our death-rate from consumption was therefore, last year, 10 per cent. less than in the five years 1885-9, 10 per cent. less than in the two years 1890-1, and 10 per cent. less than in the year 1893. This is, on the whole, a hopeful sign. I draw attention to it here, but it will be dealt with again in connection with other tuberculous diseases at a later page.

TABLE 2.

Showing the Death-rates in the Nine Largest Towns of the United Kingdom, for the 52 weeks, and each of the 13 week periods of 1895.

		First quarter of 1895.	Second quarter of 1895.	Third quarter of 1895.	Fourth quarter of 1895.	52 Weeks.
London	-	26·0	16·7	18·6	18·0	19·8
Birmingham	-	23·5	18·1	18·7	20·8	20·3
Sheffield	-	22·5	17·2	22·6	19·5	20·5
<i>Leeds</i>	-	<i>24·7</i>	<i>17·4</i>	<i>20·9</i>	<i>19·0</i>	<i>20·5</i>
Edinburgh	-	30·5	18·8	16·5	17·2	20·7
Glasgow	-	34·8	21·6	18·3	19·2	23·5
Manchester	-	27·5	23·9	25·6	23·9	25·2
Dublin	-	37·1	27·3	23·4	24·0	27·9
Liverpool	-	34·1	24·4	28·2	28·4	28·8

Respiratory diseases, not phthisis.—From this group, as a whole, our death-rate last year was 4·04; that is, 0·68 below that of the five preceding years (1890-94), and 0·16 below that of the

five which preceded them (1885-89). It has just been pointed out that the five years, 1890-94, contained the two influenza years already spoken of, during which the death-rate from lung diseases rose considerably.

Dividing these diseases into two groups, the one consisting of bronchitis, pneumonia and pleurisy, and inter-combinations, the other of other lung diseases, from the former the death-rate of 1895 was 0·61 below that of 1890-94, and 0·12 below that of 1885-9. The two years 1890-91 had a rate, from this important group, of 5·29, the three years 1892-3-4 of 3·85; our death-rate is therefore not only below that of the specially healthy triennium, but greatly below that of the two earlier years. The rate from this group, in the three several years 1892-3-4, was 4·13, 4·14, and 3·28 respectively, and the rate last year was below all but the last of these.

The rate from the other group, that of "other lung diseases," exclusive of influenza, was ·07 below that of the last, and 0·3 below that of the previous quinquennium. The death-rate from this group in the two influenza years, 1890-91, had been 0·32, in the three subsequent and healthier years (1892-4), it was 0·30.

COMPARATIVE MORTALITY.

The death-rate given in Table 1 as 20·55 is calculated upon 8,101 deaths, the whole of the deaths registered as having occurred in the city, plus those which took place at Manston Hospital.* This number, therefore, includes those of 18 paupers belonging to outside townships, which occurred in workhouses. These are not included by the Registrar-General in his returns, and the death-rate given in his annual summary is computed upon 8,083 deaths, and is equivalent to a rate of 20·50. Following the practice of previous reports, the death-rate calculated upon the larger number of deaths has been employed in all comparisons of Leeds with itself, excepting where otherwise stated, as in the note to Tables 20 and 21. In comparing Leeds with other towns, the Registrar-General's figures are taken, as the rates of other towns are derived from his reports, and he adopts the same method

* Nil in 1895.

of excluding a few deaths in calculating their mortality. It will of course be understood that the 18 deaths he has excluded are not the whole of the deaths of persons not belonging to Leeds. From Tables A and C, and the foot-notes to Tables 20 and 21, it will be seen that 167 deaths occurred in public institutions of persons not belonging to the city. There is, however, a per-contra account, but incomplete.

Thirty-three great English towns.—The rates for the 33 large towns have only been published since 1892. During the three years, 1892-4, the mortality of these towns has been 20·7, 21·6, 18·1, and in the year we are considering, 20·7. In Leeds the rates for the same years were 19·8, 22·4, 17·9, and 20·5. Our rate has been below that of the 33 towns in three out of these four years, and our average for the four is also slightly below that of those towns.

It is not safe, in estimating the vital statistics, to leave out of account the birth-rate. During 1895 the birth-rate in Leeds was 31·7, a decrease of 0·6 per 1,000 on that of the previous year, which was 32·3. In the 33 large towns the birth-rate in 1895 was 31·3, an increase of 0·6 upon that of the previous year, which had been 30·7. For the two years, therefore, our average birth-rate has been 1 per 1,000 above that of the large towns, consequently, other things being equal, our population may be supposed to include a larger proportion of very young children than these towns.

Twenty-eight large towns.—From 1882 to 1892 the Registrar-General published rates for 28 large towns. From his returns for the 33 towns, by excluding the deaths in the five towns added to his list since the last census, it will be found that during last year the death-rate in the 28 towns, previously dealt with, was 20·82, against our rate of 20·50. The rate for the four years 1892-95 (to two places of decimals), in the 28 towns, was 20·80, 21·75, 18·25, 20·82, average 20·40; and in Leeds 19·78, 22·34* 17·88, and 20·50, average 20·13.

* This is a little higher than the rate derived from the figures published by the Registrar-General, which would be 22·30. He had not included all the deaths of Leeds persons in the Manston Hall Hospital.

The following figures correspond to those given at page 9 of the annual report for 1894, but are brought up to date :—

RATES PER 1,000 PER ANNUM.

Five years, 1885-89	Leeds, 21·2	28 Towns, 20·5
Two „ 1890-91	„ 22·8	„ 22·5
Four „ 1892-95	„ 20·1	„ 20·4

Six largest English cities.—The six English cities, with populations at the last census of over a quarter of a million, were London, Manchester, Liverpool, Birmingham, and Sheffield, in addition to our own. Together they had a population estimated to the middle of 1895 of 6,656,243. The deaths registered in the fifty-two weeks ended December 28th, 1895, were 139,736, or at the annual rate of 21·1 per 1,000 living. Our death-rate was therefore 0·6 below that of the six towns, including Leeds. This difference is exactly the same as last year, when the six towns had a rate of 18·5, and Leeds of 17·9. We, however, stand fourth in the list of the six towns instead of third, as in the two previous years. Sheffield again beat us in the second decimal place. Birmingham, however, had recovered its old position. It had a rate of 20·3, against ours of 20·5. London also recovered its old position with the lowest rate in the list.

If we compare our rate with those of these towns, but excluding Leeds, the comparison is even a little more favourable, though this does not appear in the rates to one place of decimals. Our death-rate was 20·5, and that of London and the four large provincial towns, 21·1.

Five large provincial towns.—If, however, we leave out London, and compare ourselves only with the five provincial towns, including Leeds, it will be found that these latter, with an estimated population for the middle of 1895, of 2,263,897, had a death-rate of 23·4 against ours of 20·5, a difference of 2·9 in favour of Leeds.

If, again, we exclude Leeds, and compare our death-rate with that of the four largest English provincial towns (population, 1,868,351), the rate we have to compare our 20·5 with is 24·0, a difference of 3·5 in favour of Leeds. It will be noted that with

the exception of Sheffield, with which we ran neck-and-neck, the English cities with lower death-rates are in the south, those with higher rates in Lancashire. It is, perhaps, well to keep this in mind in connection with the severe winter.

Nine cities of the United Kingdom.—We again stand fourth in this list. London had a rate of 19·8, Birmingham of 20·3, Sheffield and ourselves of 20·5, our rate to two decimal places being 20·50, and Sheffield's 20·47. Edinburgh follows a little behind (20·7), then come Glasgow (23·5), Manchester (25·2), Dublin (27·9), and Liverpool (28·8). It has been already pointed out that, although we stand fourth, we are practically alongside Sheffield, and only 0·2 behind Birmingham. If we compare our actual death-rate with that of the nine great towns, we find they had an estimated population of 7,975,248, and a death-roll for the fifty-two weeks of 171,433. These nine cities, including Leeds, had thus a rate of 21·6 per 1,000 inhabitants, or rather more than 1 death per 1,000 more than in Leeds. The comparison is even a little more favourable if we again leave Leeds out, but the change is only in the second decimal place.*

In the first quarter of 1895 all these towns suffered considerably; Leeds came third in the list. Sheffield had a rate of 22·5, Birmingham of 23·5, Leeds of 24·7, London, Manchester, Edinburgh, Liverpool, Glasgow, and Dublin followed in order. Reference has already been made to the meteorological conditions which prevailed here.

In the second quarter, with a much lower death-rate, we stood third. The rate in London fell from 26·0 to 16·7, in Sheffield from 22·5 to 17·2, and in Leeds from 24·7 to 17·4. Birmingham and Edinburgh followed close on our heels with rates of 18·1 and 18·8. Then came Glasgow, whose rate had fallen from 34·8 to 21·6; next came Manchester, with a slighter fall to 23·9. The Liverpool and Dublin death-rates fell respectively from 34·1 and 37·1 to 24·4 and 27·3.

In the third quarter we came fifth on the list, Edinburgh having reasserted its prerogative with a death-rate of 16·5.

*The eight large towns *without* Leeds had a rate of 21·63, *with* Leeds, of 21·57. The rate in Leeds, as already said, was 20·50.

Then came Glasgow, 18·3 ; London, 18·6 ; Birmingham, 18·7 ; and Leeds, 20·9 ; followed by Sheffield, 22·6 ; Dublin, 23·4 ; Manchester, 25·6 ; Liverpool, 28·2. Our less favourable position in this quarter was due chiefly to the prevalence of diarrrhœa, spoken of elsewhere.

In the fourth quarter we take the third place. Edinburgh was again to the front, 17·2 ; followed by London, 18·0 ; and Leeds, 19·0. Then came Glasgow, 19·2 ; Sheffield, 19·5 ; Birmingham, 20·8 ; Manchester, 23·9 ; Dublin, 24·0 ; and Liverpool, 28·4.

BIRTH-RATE.

During 1895, the birth-rate in Leeds had been 31·7 per thousand of the estimated population. During the two preceding years it had been 32·3 and 32·4 respectively. In 1892 it was 33·5, in 1891 34·1, and in 1890 33·4. The average for the quinquennium 1890-4 was 32·1.

In 1894 the rate had been highest (33·5) in the first quarter. It fell from 32·9 in the second to 30·9 in the third, rising a little in the fourth quarter to 31·7. In the first quarter of 1895 it stood at 33·0, 0·5 below the rate of the corresponding quarter of the previous year. In the second quarter it had fallen to 32·3, 0·6 below that of the corresponding period of 1894. In the third quarter it stood at 31·1, 0·2 higher than in 1894, while in the fourth quarter it dropped to 30·2, 1·5 below the rate for the corresponding quarter of 1894.

AGE MORTALITY IN THE CITY.

All ages.—As already seen, the rate of mortality at all ages (including the deaths of all persons registered within the City, whether belonging to Leeds or not, plus any occurring at Manston), was 20·6 (20·55). As already seen, it was 24·7 in the first quarter, as compared with 18·7 in the preceding year. In the second quarter it was 17·5, as against 16·4 in the preceding year. In the third 21·0, as against 16·3, while in the fourth it fell to 19·0, as against 20·1 in 1894. The last was the only quarter of the year in which the death-rate was below that of the preceding year.

Certain age groups.—Not only was the death-rate higher at all ages, but it was so, with one exception, at each of the age groups we have been in the habit of considering. The excepted period was that between the ages of 5 and 15, when the rate of mortality was 3·6 per thousand living, both in 1894 and 1895. It was, however, as will be presently seen, at the age periods, under 5 and over 60, that the increase was greatest as compared with 1894.

It must, however, be remembered that 1894 had been an exceptionally healthy year. As compared with the four years 1890 to 1893, during which you have been furnished with statistics of this kind, it will be found that the death-rate under one was practically the same. But at the period 1 to 5 our rate last year was below that of the four year group, and that of the other four groups the rate was less in 1895 than in the average of those four years.

TABLE 3.

Shewing the births and deaths registered in the City of Leeds in the four periods of 13 weeks ended March 30th, June 29th, September 28th, and December 28th, 1895.

MORTALITY FROM ALL CAUSES AT SUBJOINED AGES.								
1	2	3	4	5	6	7	8	9
1895.	Regis- tered births.	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwards.
Estimated population at these ages..		395,546	11,233	38,269	88,169	81,351	155,122	21,402
I. Quarter..	3,254	2,437	531	394	94	110	628	680
II. do. ..	3,186	1,722	424	222	70	84	503	419
III. do. ..	3,064	2,074	907	277	79	84	400	327
IV. do. ..	2,974	1,868	522	319	75	107	461	384
52 weeks ..	12,478	8,101	2,384	1,212	318	385	1,992	1,810

Under one.—Of the children under one, the death-rate calculated from the population was 213 per thousand. In 1894 it had been so low as 177, but in the four preceding years it had averaged a little more than 212. In 1890 it was 203; in 1891 212; in 1892 199; in 1893 235. In the several quarters of 1895 the infantile death-rate, estimated in this manner, was 190, 152, 324, 187 respectively. The third quarter had its usual bad pre-eminence. It will be noted that as compared with the healthy year 1894, the first and third quarters were the culprits. The second quarter had the same rate in both years, and the fourth a sensibly lower rate in 1895 than in 1894. The death-rate at this age period is dealt with again in a later paragraph.

One to five.—In children between the ages of one and five, the death-rate for the year averaged 31·8 per thousand living, as against 30·3 in 1894, and an average of 35·8 in the four preceding years. Of those years, 1892 had a lower rate (30·0) than the one we are considering. All the other three had higher rates, 33·9 in 1890, 39·1 in 1891, 40·2 in 1893.

TABLE 4.

1	2	DEATHS PER ANNUM PER 1,000 LIVING.								
		3	4	5	6	7	8	9	10	11
1895.	Birth-rate.	At all ages.	Under 1 year.	1 and under 5.	5 and under 15.	15 and under 25.	25 and under 60.	60 and upwds.	25 to 65.	over 65.
I. Quarter..	33·0	24·7	190	41·3	4·3	5·4	16·3	127·5	19·2	170·6
II. do. ..	32·3	17·5	152	23·3	3·2	4·2	13·0	78·6	14·3	109·6
III. do. ..	31·1	21·0	324	29·0	3·6	4·2	10·4	61·3	11·4	85·1
IV. do. ..	30·2	19·0	187	33·4	3·4	5·3	11·9	72·0	13·7	92·3
52 weeks ..	31·7	20·6	213	31·8	3·6	4·8	12·9	84·9	14·7	114·4

The rate in 1895 was highest (41·3) in the first quarter; lowest (23·3) in the second. In the third it was 29·0 as against 20·2 in the preceding year, but in the fourth it was 33·4 as against 50·9 in the healthy year 1894. It may be taken, therefore, that as compared with all except the two exceptionally healthy years 1892 and 1894, the death-rate at this age, in 1895, was much less than usual.

Five to fifteen.—As just said, the rate 3·6 was the same in 1895 and 1894. In the four preceding years it had averaged 4·2, and in each of those years it was above the rate of the year we are considering. It was 4·5 in 1890, 4·5 in 1891, 3·7 in 1892, and 4·0 in 1893. In the several quarters of 1895, it was 4·3 in the first, the same as in 1894; 3·2 in the second, which was below the rate of 1894; 3·6 in the third, or one death per thousand above the rate of 1894; and 3·4 in the fourth, which was below the rate of 1894.

Fifteen to twenty-five.—Of this age group the death-rate (4·8) was higher than in 1894, when it had been 4·2, but it was below the average (5·0) of the four preceding years, and below the rate of each of those years except 1892, which had had a rate of 4·3. The rate was 5·3 in 1890, 5·2 in 1891, and 5·2 in 1893. The 1895 rates in the several quarters were 5·4 in the first, 4·2, 4·2, and 5·3 respectively in the remaining quarters.

Twenty-five to sixty.—The death-rate at this age (12·9) was 1·2 higher than that of the corresponding period in 1894, but 1·8 below the average rate for the four preceding years. It was the same as the rate in 1892. That for 1890 had been 16·5, for 1891 15·5, and for 1893 13·7. The rate was highest in the first quarter (16·3), which was 2·8 higher than that of the first quarter of 1894. It was 13·0 in the second quarter, as against 12·0 in 1894; 10·4 in the third, as against 10·7 in the previous year; and 11·9 in the final quarter, as against 10·6 in 1894.

Sixty and upwards.—In persons over 60, the death-rate (84·9) was much higher than in the preceding year (68·3), but the four preceding years had a higher average (87·5). The two earlier of them, 1890 and 1891, had rates of 94·6 and 91·8, considerably

above those of the year we are considering. The two later, 1892 and 1893, each had a rate of 81·9, or 3 per thousand below the rate for 1895.

The rate in 1895 had been very high in the first quarter 127·5, that of the preceding year having been only 79·8. In the second quarter it had been 78·6, as against 66·0 in the preceding year. In the third quarter it was 61·3, as against 57·8 in the preceding year, while in the final quarter it was 72·0, as against 69·6.

Alternative age groups.—If instead of taking the dividing line at 60, we take it at 65, the rates are much heavier; that for the whole year being 114·4, against 87·3 the preceding year. In the four quarters it was 170·6, 109·6, 85·1, 92·3, against 103·5, 83·9, 73·3, 88·3 in the four quarters of 1894, and 139·4, 85·4, 91·5, and 119·0 in the four quarters of 1893; the average for that year having been 108·0.

It will be noted that the first quarter in all three years had the heaviest death-rate at this age group, but that this excess was much greater last year than in the two preceding years; the rate in the first quarter having been 49 per cent. in excess of that of the whole year, in 1895, as against 18 per cent. in 1894, and 29 per cent. in 1893. It will be also noted that, last year, the second quarter had also a high death-rate at this age group.

The other age period altered by this division—25 to 65, instead of 25 to 60—also shows a higher death-rate in 1895 than in the preceding year, the excess amounting to 1·3 per 1,000, or about a little less than 10 per cent. In 1894, the only other year for which the return at this age grouping was got out, the rate (15·4) was in excess 0·7, or nearly 5 per cent. of that for 1895.

Further consideration of infantile death-rate.—I have so frequently explained the reason for getting out the mortality in children under one by certain other methods, that it is unnecessary to do more than refer to Table 5, and to remind you that the figures given in first line in that table, which are the same as those given in Table 4, column 4, are dependant upon two uncertain factors, first (inversely) the actual population at the time of the census,

which might have been temporarily above or below the usual in consequence of the epidemic processes at work, or not at work, during the months immediately preceding the enumeration, and secondly, the rate of increase of population at this age, which we have to suppose to be the same as at all ages during the decade, 1881-91.

The more usual method of estimating the death-rate at this age is by the relation of deaths to births in the same period. This is given in the second line of Table 5 for the several time

TABLE 5.

Mortality in Children under one year of age during the 52 weeks of 1895.

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.	YEAR.
Calculated per 1,000 of the population under one, estimated to the middle of 1895, on the supposition that the whole population of the city had increased at G.P. at the rate of 1.745 per cent. per annum, which was the rate of increase between 1881 and 1891, and that children bear the same proportion to the population as in 1891 ...	190	152	324	187	213
Deaths under one per 1,000 births registered in same period	163	133	296	176	191
Deaths per 1,000 registered births, the latter averaged during each quarter and the four quarters preceding it, and the average of these for the year	169	135	291	167	190
Average rate by last method for five preceding years ...	157	156	224	167	176

periods dealt with. But, obviously, the children under one dying in any three-monthly period are not necessarily those born in the same period. And in the third line the births with which the deaths in any quarter are compared are the average births registered during the five quarterly periods, of which that particular period was the last. The fourth line gives the average of the quarterly death-rates obtained by this method during the five preceding years. Examining the death-rate for the whole year, in the third line, it will be noticed that it was last year practically the same as that obtained by using the births of each quarter as the standard of comparison. The more elaborate method gave a higher death-rate in the first and second quarters, but a lower rate in the third and fourth, the rate for the whole year being very slightly less by the more elaborate method.

All these methods are, of course, mere approximations. The only rate of much value for a quarter would be that calculated from a population obtained by a census taken each week of the quarter, and the results divided by 13. As a sort of test, the infantile death-rate for the third quarter has been calculated out by a slightly different method. Instead of taking the births in each of the five periods of 13 weeks ended September 28th as of equal value, we have considered that about one-half of the infantile deaths would be those of children under three months, and about one quarter between three and six months, and that the remaining deaths might be considered as pretty equally distributed over the remaining six months. We then, by taking half the births that occurred in the third quarter of 1895, a quarter of those that occurred in the second, and an eighth of those that occurred in the first, and a similar proportion of those that occurred in the fourth quarter of 1894, get a birth population more comparable. It amounts to 3,119, instead of 3,114 as calculated by the five-quarterly method. This slight difference does not affect the rate per 1,000, which is 291 in each case, a fraction slightly below by the experimental one, and slightly above by the method used in the table.

As compared with the average of the four previous years, the rates given in the third line are above those of the

five years in the first and third quarters, but below that average in the second. The average for the whole year obtained from the four rates, however, is considerably above that of the four years. As compared with the preceding and specially healthy year (1894), the difference is still greater.

In the first quarter the 1895 rate was considerably in excess of that for 1894, in the second only slightly so, in the third considerably above, and in the fourth quarter below the 1894 rate, while for the whole year the rate for last year was much above that of its immediate predecessor.

Part II.—SPECIAL DISEASES.

In order not to delay the publication of this report, I shall shorten the subject matter in dealing with special diseases, and reserve the fuller consideration of any particular disease needing it for a supplemental report. I may thus wish to say something further on the important subject of diarrhoea, a disease which again made havoc amongst young children during the autumn quarter of 1895. I should wish also to deal, rather more fully than I propose to do in the report itself, with the subject of typhoid fever, a disease which has a sort of endemic hold upon the town of Leeds, but which last year asserted itself to such an extent that our isolation accommodation was severely taxed. As far as possible, I shall keep to the arrangement of previous reports, and where obliged to depart therefrom shall, as far as possible, keep the old numbers of the tables for convenience of reference.

Tuberculosis.

The annual death-rate from the whole group (including scrofula) was 2·35 per 1,000 of the estimated population in the year we are considering, as against 2·14 in the unusually healthy year 1894. Considered as a percentage of all the deaths however, our rate, either with or without scrofula, was 11·4 per cent. against 11·8 without, and 11·9 with scrofula in the healthy year 1894. While, therefore, tuberculous diseases showed a slight increase upon the small death-rate of the previous year, they formed a rather smaller percentage of the total deaths. The actual deaths (including those from scrofula) were at the rate of 2·52 per 1,000

of the estimated population in 1890, 2·63 in 1891, 2·16 in 1892, 2·52 in 1893—an average for the four years (1890-3) of 2·46, than which our rate, for 1895, is lower by 0·11. In 1894, as already said, the death-rate fell to 2·14, than which our rate is higher by 0·21, but the average of the five years (including the healthy year 1894) was 2·39, than which our death-rate is fractionally lower. Tuberculosis (including scrofula) caused 11·3 per cent. of all deaths in the quinquennium, 1890-94, against 11·4 last year. The year 1892 was the only one of the five in which the proportion of tuberculous to other deaths was considerably lower than in 1895. Further figures relating to this matter were given in table 6A in the report for 1894.

TABLE 6.

Mortality from Tuberculosis, 1895.

1895.	Tuber- culosis, general and un- defined.	Phthisis.	Hydro- cephalus.	Tuber- culous mening- itis.	Tuber- culous periton- itis.	Tabes mesen- terica.	Scrofula.	TOTAL.
I. Quarter ..	30	177	3	23	5	16	2	256
II. do. ..	27	172	7	23	1	14	..	244
III. do. ..	34	135	3	15	7	28	..	222
IV. do. ..	23	127	3	16	2	32	..	203
Year (52 weeks) ..	114	611	16	77	15	90	2	925
Annual death rate, 52 weeks of 1895 ..	0·29	1·55	0·04	0·20	0·04	0·23	·00	2·35

It will be noted that, as usual, consumption figures most markedly in the group. Of the 2·35 deaths per 1,000 of the

population, 1.55 were due to this disease. The deaths were most frequent in the two earlier quarters of the year. The average death-rate from this cause was 1.49 in 1894, 1.70 in 1893, 1.42 in 1892, 1.79 in 1891, and 1.66 in 1890, while in the five preceding years (1885-89) it had been 1.70.

It will therefore be seen that, with the exception of the years 1894 and 1892, the death-rate from consumption was lower in 1895 than in any year that I have had to report upon. It was also below the average of the years 1885-9. On the whole this is satisfactory. Upon the increase or diminution of tuberculous diseases, other than phthisis, it would not do to lay too great stress, so much depends upon the method of certification. There is probably on the whole, however, a tendency to refer to tuberculous diseases deaths which might, a few years ago, have gone down to less specific causes. On the other hand, a large proportion of the deaths recorded as due to meningitis might probably, if greater care were taken in diagnosis, be referred more accurately to tubercle.

Diseases chiefly affecting Lungs and Air Passages.

Time incidence in 1895 and previous years.—During the period 1885-9, the death-rate from all lung diseases (including consumption, laryngitis, “catarrh,” but exclusive of influenza and croup) was 5.93.* During the five following years it was 6.34. The mortality in the latter period, although deaths certified as due to influenza are excluded, contains, of course, the mortality from lung diseases secondary to that epidemic. During 1895, the rate from the same group was 5.59. This is less than in the pre-influenza period, and considerably less than in the quinquennium, 1890-94. The latter period is, however, divisible into the two influenza years (1890-91), with a rate of 7.33, and the specially healthy triennium (1892-4), when the rate was 5.69. The rate for 1895, though less favourable than that of 1894, the last year of this triennium, 5.08, was lower than the rate for either 1892 (5.98), or 1893 (6.18).

* Without “catarrh” 5.90. “Catarrh,” previously to 1890, included gastric, intestinal, and other non-pulmonary catarrhs. Since 1890, all catarrhs not of air passages have been excluded from lung diseases. In the line in Table 1, dealing with the years 1885-9, catarrh is excluded entirely.

Quarterly rates under and over five and at all ages.—Some information has already been given at pages 9 to 11, in the first part of the report, in regard to the special groups making up this general respiratory rate. In the first quarter of 1895, the rate was 8·76. It fell in the second to 5·39, and in the third to 3·20, rising again to 5·03 in the following quarter. It is obvious, therefore, that the death rate was highest during the first quarter.

TABLE 6b.

Shewing death-rates per 1,000 living, under and over the age of five, from all diseases of the breathing organs, including consumption.

	I.	II.	III.	IV.	YEAR.
Under 5 ..	22·87	15·41	7·46	17·11	15·72
Over 5 ..	6·74	3·96	2·59	3·31	4·15
All Ages ..	8·76	5·39	3·20	5·03	5·59

During this quarter the rate was above the average, both amongst those under and over the age of five. While for the whole year the mortality (as shown on table 6B) from all diseases of the air passages, including phthisis and laryngitis, was 15·72 under, and 4·15 over, the age of five, in the first quarter the rates were 22·87 under, and 6·74 over, five. There was an increase under the age of five at all the groups given in table 6c, although from phthisis such increase was only fractional. There was a considerable excess above the average for the year under the age of five from bronchitis (41·5 per cent.), broncho-pneumonia (55·5 per cent.), pneumonia (47 per cent.), and from other non-tuberculous lung diseases, exclusive of laryngitis (37·3 per cent.), or including laryngitis (53·0 per cent.), and there was a slighter increase from phthisis (5·1 per cent.).

Similarly the deaths over five, from bronchitis, broncho-pneumonia, and pneumonia, were respectively 118, 16, and 49 per cent. above the average of the year. The deaths from pleuro-pneumonia and pleurisy were only 19 in the whole year; eight of

these occurred in the first quarter, an excess of 68 per cent. ; but like the separated broncho-pneumonia, too small a number to be of any great value, while the deaths from laryngitis and other non-tubercular lung diseases, were 54 per cent. in excess of the yearly mean.

In the second quarter the rate was below the average of the year, both in those under five and in those over five, but the proportionate difference was much greater at the later age period. From bronchitis the rate under five was appreciably below that of the year, that over five considerably so. From broncho-pneumonia the rate under five for the year was 4·07, for the quarter 3·89, a difference of 0·18, or rather more than four per cent., while over five, the death-rate, although twenty-two per cent. below the average for the year, was so small that the value of the fall is slight. From pneumonia the numbers were nearly the same, both above and below five, as those for the year, while from the miscellaneous group the death-rate in the second quarter was appreciably below, under the age of five, and slightly so above that age. The whole non-tuberculous group, exclusive of laryngitis, had a death-rate of 14·68 amongst children under five in the second quarter, against 15·07 in the year. From laryngitis the rate under five was nearly the same as the average, and from phthisis it was in excess. Over five, the non-tuberculous diseases were below, but from phthisis slightly above the average of the year.

It was in the third quarter that the great drop in the mortality of young children occurred. From bronchitis there were only 3·08 deaths per 1,000 living under five, as against 8·25, the average of the year ; from broncho-pneumonia 2·43, against 4·07, and from pneumonia 0·89, against 2·15 ; these three groups therefore having a rate of 6·41, against 14·47 (or 55·7 per cent. below). The deaths from other non-tuberculous diseases were also fewer. A slightly larger proportion of deaths in children under five were registered as due to phthisis ; these, of course, do not greatly count. The death-rate from laryngitis was nearly equal to the average, and identical with that of the second quarter, while only half of that of the first in those under five. Bronchitis caused more than one-third of the average death-rate for the year, broncho-pneumonia (although the numbers were small) nearly two-thirds, and pneumonia rather

over half in persons over the age of five. Including pleuro-pneumonia and pleurisy, this group caused deaths at the rate of 0·97 per 1,000, against 2·28, the average for the year. From phthisis also the death-rate was less, 1·51 against 1·72.

In the fourth quarter, amongst children under five, the deaths from bronchitis were in excess of the yearly average, from broncho-pneumonia below, from pneumonia slightly above the average. The whole non-tuberculous group had a rate of 16·79, as against 15·07 for the year. The rate from laryngitis, however, was below the average for the year, and from phthisis also. In persons over five, the deaths from bronchitis were also below the average, from broncho-pneumonia a little above, from pneumonia very slightly below. The whole non-tuberculous group had a rate of 1·87, against 2·42. From laryngitis there was no death registered; phthisis had a rate of 1·44, against 1·72.

PNEUMONIA AND PLEURO-PNEUMONIA.

Though this group is classed amongst diseases of the lungs and air passages, the disease is in many cases of zymotic origin. Many of the deaths included in it might probably have been more accurately classed as broncho-pneumonia, and many such doubtless accompanied the prevalence of measles in the first, and whooping-cough in the fourth quarter. Such deaths would be chiefly found amongst those of children under five. Besides this, however, there is the zymotic element in the causation of croupous-pneumonia, and, although the cases in which this form of lung disease is differentiated in the death certificate are few, they probably form a considerable proportion of the deaths from "pneumonia" in persons over five. Accordingly we have for some years been in the habit of analyzing the circumstances attending all fatal cases of pneumonia and pleuro-pneumonia. Last year, in persons over five, the death-rate from pneumonia and pleuro-pneumonia was equivalent to 0·51 per 1,000 of the whole population above that age. In the very healthy year 1894, it had been 0·51; in the years 1893 and 1892, 0·75 and 0·67 respectively.

HOUSE CONDITIONS, ETC.

There were 275 deaths in the city ascribed to pneumonia. This number includes the deaths certified as from croupous-pneu-

monia, lobar-pneumonia, pneumonia; but not those from broncho-pneumonia, catarrhal-pneumonia, or pleuro-pneumonia. From the latter, pleuro-pneumonia, there were five deaths. Of the 275 from "pneumonia," four occurred in the General Infirmary, nine in the Leeds, one in the Hunslet, and five in the Bramley Workhouse, one in Armley Gaol, and one in club premises. The house conditions in the remaining 254 pneumonia cases, and in the five pleuro-pneumonia cases, were all examined and tabled. I postpone the usual tables, 7 and 7a, dealing with pneumonia and pleuro-pneumonia, but a summary of the conditions found is given in table 25, page 103, which I supplement from the original draft.

Through houses, &c.—Of the 254 pneumonia death-houses, 79 (or 31·1 per cent.) were throughs, 175 (or 68·9 per cent.) not throughs—that is, either back-to-back houses or single-houses without a through draught. The corresponding percentages last year were 28·1 throughs, 71·9 not throughs. If we add the five deaths due to pleuro-pneumonia, in all of which the house conditions were investigated, the percentages for 1895 become 31·3 and 68·7.

Drainage.—Summarizing the drainage conditions, we put under the head of "good drainage" those death-houses in which every waste was disconnected *outside* the house, and no other fault of drainage found, and in which, if there were a water-closet inside, the soil-pipe was carried above the eaves the same diameter as below. Of the 254 death-houses, 101 (or 39·8 per cent.) came under this category, whilst 153 (or 60·2 per cent.) had some serious fault. If to these we add the five cases of pleuro-pneumonia, of which two came into the first and three in the second class, the percentages are not altered.

Closet accommodation.—Of the 254 pneumonia death-houses, 92 (or 36·2 per cent.) had water-closets, 74 (or 29·1 per cent.) trough latrines, 88 (or 34·6 per cent.) middens or pails. Of the 92 with water-closets, 17 (6·7 per cent. of all the death-houses) had inside closets with fully ventilated soil-pipes, 9 (3·5 per cent.) had inside closets, not F.V., and the remaining 66 (26 per cent.) had outside closets.

If we add the five pleuro-pneumonia cases they make the percentages as follows :—water-closets, inside and F.V's., 6·6 ; inside, not F.V.'s., 3·5 ; outside water-closets, 26·6 ; troughs, 29·0 ; middens or pails, 34·4.

Commoner zymotic diseases.

SMALL-POX.

Incidence.—Thirteen illnesses were reported as possibly small-pox. Of these, nine turned out really to be so ; the other four were cases of chicken-pox. All the nine small-pox cases were removed to the small-pox hospital at Manston, the four that turned out to be chicken-pox were taken to the sanatorium cottages, also at Manston. Another case of chicken-pox from the Blind Institution, never, however, regarded as small-pox, was isolated at Beckett Street Hospital. We have one other case of chicken-pox in our books which was watched at home on account of its suspicious character.

The nine cases of small-pox all recovered. They came respectively, seven from the Hunslet, and one each from the West and Kirkstall registration districts. They occurred as to wards as follows :—in the South, six cases, and in the East Hunslet one, both in the Eastern division ;—one case in the North-West, one in the Headingley, both in the Western division.

Isolation of families.—The nine patients lived in eight houses. Other members of these eight families were isolated in the sanatorium. These persons numbered 28, of whom 14 remained under observation in our cottages for fifteen, and 14 for sixteen days. No case of small-pox developed amongst any of the 28.

Previous vaccination of patients.—Of the 9 patients, 8 had been vaccinated. None of these 8 were under 22 years of age. Four were classed by Mr. Pearson as “well vaccinated,” and 4 as “imperfectly.” Only 1 of the 8, however, had four marks. One had three marks described as “two fair” and “one poor.” Four had two marks, one of them being classed by Mr. Pearson as “well,” and one “imperfectly” vaccinated. Each was, however, said to have “two good marks.” The patient in each case was

aged 34. Another of the four (age 30) classed as “imperfectly” vaccinated, had “one fair” and “one poor” mark; whilst the fourth (age 27), classed as “well vaccinated,” had “one good” and “one poor” mark. About this case I have a word to add presently. The two remaining vaccinated patients, but classed as “imperfectly” vaccinated, had, the one (age 22) “one good” mark, the other (age 32) had one “very poor” mark.

The remaining case was that of an unvaccinated infant a year and a half old and, as already said, the only one of the nine not yet of age.

Interesting comparison as to immunity.—The patient, aged 27, with “one good and one poor” mark, had been revaccinated before coming to us on April the 6th, and the vaccination took in three places. He was admitted to the hospital on the 8th. His attack is stated to have commenced on the 2nd of April, the eruption to have come out on the 8th, on which day, as just said, he came to us. He was the manager for a wholesale clothier, who had himself been admitted to hospital on the 26th of the previous month. He had called to see his master on business matters before the latter was removed to hospital. The dates of his visits are the 23rd, 24th, and 25th of March, and the eruption, in the master’s case, is said to have occurred on the 24th. The only two persons, known to have been in contact with the latter after his illness, were this patient, who visited him on the dates named, and the housemaid where he lived. This girl, also aged 27, was removed to the sanatorium when her master was taken to hospital. She was found to have “one fair foveated mark,” due to infantile vaccination. She was said to have been revaccinated at Dublin about ten years ago. Of this, not unnaturally, there was no sign. She was revaccinated on the 27th of March, successfully, in three places, and entirely escaped any attack of small-pox. It is interesting to compare the circumstance of these two persons, the one, a girl, attending to the patient, and in frequent contact with him; the other, a man, visiting him on but three occasions. Both were the same age, both had been vaccinated in infancy, one showed “one fair” mark, and had probably been revaccinated. She was certainly revaccinated very soon after arriving at the

sanatorium; that is to say, she was revaccinated the very day after her master's disease was pronounced to be small-pox. The other, the man, did not come under our observation, and although he was revaccinated, this was not done until *ten days later* than in the case of the girl, and evidently too late to prevent the development of the disease, the attack of which had apparently commenced four days before his revaccination. The revaccination may possibly have been done as treatment rather than as a preventive measure.

Previous vaccination of persons in the sanatorium.—The average age of the 28 persons isolated in the sanatorium was 19·7 years. None of these were attacked. Two of them, aged 29 and 41 respectively, had not been previously vaccinated, and one, aged 58, was said to have been, but had no mark. Of the remaining 25, adopting the classification as in my report for 1893, four had “poor” marks, eight had “fair” marks, eleven had “good” marks, and two were said to have been revaccinated, one in the army, the other the case of the girl just mentioned.

Revaccination in quarantine.—Eight of the inmates were young children, whom it was not considered necessary to revaccinate. One was a woman of 60, who had two “faint” (infantile) marks, but refused to be revaccinated. All the other nineteen were revaccinated, all except two, successfully. Of these two, one a child of 6, with one “good” mark, was revaccinated in three places unsuccessfully. The other was the “old soldier” of 31, who had been revaccinated five years before, and had “three good defined foveated” marks due to this. In this man's case there was no reaction, although he was revaccinated in two places. As a general rule revaccination was offered, except in the case of children where it was clearly unnecessary, the day after admission to the sanatorium, and in the majority of cases was done on that day. This was the case in nine out of the 28. In five cases vaccination was done the day of admission, four were revaccinations, one a primary vaccination, and, in three, revaccination was done the second day after admission. In two others vaccination was at first refused, but was ultimately done on the

fifth day, that is, four days after admission. One of these was a primary case; in the other the patient was said to have been vaccinated, but had no mark. In two of the nine revaccinated cases mentioned previously, the first vaccination was unsuccessful; it was repeated a week later successfully.

HOUSE CONDITIONS.

Through houses, &c.—Of the 9 case-houses, 2 were throughs, and 7 not throughs. There were two cases in one house which was a back-to-back.

Inmates and rooms.—There was an average of 6 persons and 4·75 rooms per house, and 1·3 inmates per room. In small numbers like these, however, a single house affects the average. One house contained 12 inmates and had 15 rooms. It was the house in which the clothier spoken of lodged. If this house be left out, the average number of inmates becomes 5·1, of rooms 3·3, and of persons per room 1·6.

Drainage.—The drainage was good in one and bad in eight of the case-houses, using these terms as explained under the heading of pneumonia, page 29. None of the eight bad had the drains entirely severed from the sewer. We have no record of any tests having been applied, or whether they were otherwise defective. The only house with an inside water-closet (not F.V.) had other faults, in addition to that of the soil-pipe.

Closets.—Three of the case-houses had water-closets, one inside not F.V., and two outside. Three had the use of trough-closets and three of middens. One house had two inside water-closets (not F.V.) and a midden. The case-house is entered above as a W.C. house, as the (not F.V.) W.C. is regarded as a greater nuisance than a midden.

MEASLES.

Measles caused 136 deaths in the 52 weeks of 1895, against 341 in 1893, and 292 in 1894. The disease cannot, therefore, be regarded as having been specially fatal last year. These 136 deaths were equivalent to an annual rate of 0·13 per 1,000. In 1894 the rate was 0·75; it was 0·90 in 1893, 0·20 in 1892. In the triennium, 1890-92, it had been 0·39; in the quinquennium, 1885-89, 0·57.

Time incidence.—During 1894 the annual rates per thousand of the estimated population were 0·01, 0·08, 0·24, and 2·68 for the several quarters. The deaths in the several quarters of 1895 were, first quarter, 75 under, and 7 over five; second quarter, 12, all under five; third and fourth quarters, 10 and 32 respectively, all under five. The annual death-rates for the quarters from this cause, at all ages, were therefore 0·83, 0·12, 0·10, and 0·32.

We heard, during life, of 254 cases of measles. None of these were removed to hospital. In the first quarter we investigated 102, in the second 50, in the third 36, and in the fourth 66 cases.

HOUSE CONDITIONS.

The consideration of age and sex incidence, school attendance, and of the tables containing detailed information of the house conditions in districts, I postpone, as the number of cases is comparatively small. From information, however, which will be found in table 25, and further details in manuscript, I epitomise the general house conditions as follows.

Recovery and death-houses.—Of the 136 deaths, our first information about 133, came from the registrars. Three of the fatal cases we heard of during the life of the patient. One hundred and ninety-three patients were heard of in houses in which no death occurred; 58 others were heard of and recovered in houses in which some of the 136 deaths occurred. I divide these three classes of houses in the same manner as formerly. The house in which a death occurred is considered as a separate house for each death in it. There are thus 136 death-houses. The houses in which no death occurred, and in which all cases of measles heard of recovered, are counted as often as there were cases in them. There are thus 193 recovery houses. There were also in the houses in which death occurred, 58 other cases which recovered. These houses are counted for every one of the 58 cases, but the information is put in a separate line in table 25. The two earlier groups are therefore termed death-houses and recovery houses.

Through houses, etc.—Of the 136 death-houses, 33 (or 24·3 per cent.) were through houses, while 103 (or 75·7 per cent.) were not throughs. Of the 193 recovery houses, 40 (or 20·7 per cent.)

were throughs, while 153 (or 79·3 per cent.) were not throughs. Of the remaining small group of recoveries in death-houses, numbering 58, 13 (or 22·4 per cent.) were throughs, 45 (or 77·6 per cent.) not throughs. The percentage of through houses is greater amongst those in which fatal cases occurred than in those in which all the patients recovered. The percentage of houses in which some recovered and some died was intermediate between the two. The numbers, as already said, are small, but it is noteworthy that for the first time I have to report to you a higher proportion of throughs amongst the death- than the recovery houses.

Drainage.—Grouped according to drainage, of the 136 death-houses, 61 (or 44·9 per cent.) had apparently good, and 75 (or 55·1 per cent.) bad drainage. This, however, is making no allowance for defects other than those planned, as in very few cases was any testing of the drains undertaken, and as pointed out in my annual report for 1894, even houses with every drain “disconnected,” are sometimes found still already connected to the sewer (*Annual*, 1894, pp. 135, 136, 139). Amongst the recovery houses, on the other hand, well-drained houses were 39·9, badly drained, 60·1. This is the first time in five years that the death-houses had a larger proportion of well drained houses than the recovery houses. The 58 recoveries in death-houses occurred, 32 in well drained, and 26 in badly drained houses.

Closet accommodation.—Of the 136 death-houses, 31 (or 22·8 per cent.) had water-closets, 48 (or 35·3 per cent.) trough latrines, 56 (or 41·2 per cent.) middens or pails, and 1 (or 0·7 per cent.) were without any convenience at all. Amongst the 193 recovery houses, the numbers were: 36 with water-closet arrangements (or 18·7 per cent.), 61 (or 31·6 per cent.) with trough latrines, 96 (or 49·7 per cent.) with middens or pails. Again we notice that the recovery houses, contrary to what has occurred formerly, contained a smaller percentage of water-closet houses, and a larger percentage with middens. The numbers for a single year, as I have pointed out in previous reports, are too small for much importance to be attached to them, and in the year 1895, as we have seen, the numbers are smaller than usual.

SCARLET FEVER.

Time incidence of mortality.—Our information about scarlet fever is partly from the death returns, and partly from the notification of illnesses. There were 52 deaths from this disease registered during the 52 weeks of 1895: 39 amongst children under five, 13 amongst persons above that age. In the first quarter of the year the deaths were 5, in persons under, and 2 in persons over five. In the second quarter, 5, all in children under the age of five. In the third quarter, 12 in those under, and 6 in those above five years of age, and in the fourth quarter the numbers were 17 and 5. Regarded in proportion to the estimated population the deaths from scarlet fever were thus at an annual rate of 0·13 per thousand of the population and, in the several quarters, of 0·07, 0·05, 0·18, and 0·22 respectively. In the previous year the proportion had been 0·16, 0·16, 0·06, and 0·17 in the respective quarters, the whole year having the same rate of 0·13 per thousand. In the first quarter of the present year (1896) the rate was 0·11 per thousand.

Cases notified or heard of.—During the 243 days from May 1st to December 29th, 1894, the period of that year during which notification was compulsory, 758 cases of scarlet fever were heard of during life, and 3 after death, a total of 761 heard of during the eight months. During the fifty-two weeks of 1895, 873 were heard of during life, and 2 after death, a total of 875†, making for the twenty months, during which notification had been compulsory, a total of 1,635 cases coming to our knowledge.

The cases heard of in the several complete quarters since the adoption of the Act were as follows: third quarter, 1894, 217 alive, 1 dead; fourth quarter, 1894, 272 all alive; first quarter, 1895, 145 all during life; second quarter, 1895, 115 all during life; third quarter, 1895, 296 alive, and 1 already dead; fourth quarter, 1895, 317 alive, one dead; first quarter, 1896, 167 all alive when notified. Some of the patients included as alive were dead before the information of the illness reached us.

Comparison of deaths in city with number of cases treated in hospital in 1895 and five previous years.—In 1890 the deaths from

this disease were 0·28 per thousand of the estimated population, whilst the number of cases treated in our hospital were 133, representing 0·36 per thousand of the estimated population. In 1891 the deaths were 0·18 per thousand, the cases treated in hospital 152, or 0·41 per thousand. In 1892 the death-rate was 0·20, the cases treated in hospital 440, or 1·18 per thousand. In 1893 the death-rate was 0·08, and the cases hospitalled 188, or 0·49 per thousand. In 1894 the death-rate, as just said, was 0·13 per thousand, the cases treated in hospital 453, or 1·17 per thousand; while in the year 1895, the one we are considering, with the same death-rate, 0·13, the cases treated in hospital were 493, or 1·25 per thousand.

Table showing cases of Scarlet Fever heard of in Leeds during the six years, 1890-95, with the numbers admitted to the City fever hospital, and the deaths in the City and in hospital; showing also for biennia the relations of the deaths in the City, and the admissions to hospital.

	CASES		DEATHS.		Per 1,000 living (Annual Rates.)	
	Heard of.	Admitted to hospital.	City.	Hospital.	Deaths in City.	Cases in hospital.
1890	337	133	103	23	} 0·23	0·39
1891	328	152	66	18		
1892	812	440	74	19	} 0·14	0·83
1893	316	188	31	6		
1894*	967	453	52	18	} 0·13	1·21
1895†	874	493	52	29		

It will be noticed that with the exception of the year 1893 (when we had a smaller number of cases in hospital as well as a smaller number of deaths) the increased number of cases in hospital has been accompanied by a diminished mortality. Thus, dividing the period into the three later and the three earlier years, during the

* Notification became compulsory in May, 1894. † 874 "heard of" does not include a fatal case (included, however, in the 52 deaths) of which we had no information till we received the Registrar's returns.

former period, with a death-rate of 0·22 per thousand, we treated for scarlet fever in our own hospital an average of 0·65 cases per thousand of the population. During the latter period (1893-5), with a death-rate of 0·11, only half that of the earlier period, we hospitalled on this account an average of 0·97 per thousand of the population of Leeds. That is to say, with the death-rate from the disease reduced to half, we had an increase by nearly one-half of the number of cases treated in hospital.

It will be remembered that during the greater part of the last two years, with an average death-rate of 0·13, notification had been compulsory. If therefore we group the six years into three, instead of two groups, we shall note that in the first biennium the death-rate from scarlet fever was 0·23, and the cases treated in our hospital 0·38 per thousand. In the two following years it fell to 0·14, and the cases treated in hospital increased to 0·83 per thousand, while in the last period of two years, during the greater part of which notification was compulsory, the death-rate fell to 0·13 per thousand, and the cases treated in hospital rose to 1·21.

Exactly how much of the decrease of the death-rate is accounted for by the increase of the number of cases treated in your hospital, it is of course difficult to say. There is no doubt the mortality is lessened by taking cases from crowded homes and treating them in the more airy hospital wards. This benefit would probably have been even greater had the space at command been larger. The want of accommodation has acted in two ways: (1) by diminishing the air space about the patients, and (2) by compelling us to leave at home many cases which ought to have been isolated in hospital.

HOUSE CONDITIONS.

In the report for 1894, the information furnished in previous years in regard to the sanitary condition of houses where cases of scarlet fever occurred, was given in detail as to the cases heard of during the 121 days ended April 30th of that year, before notification became compulsory. During that period it will be remembered 209 cases of scarlet fever were reported or heard of. Nine occurred in public institutions, and the house conditions were described of the 213 remaining with the usual detail. It was

intended to deal with the 761 cases reported during the remainder of the year, that is, after notification came into force, along with those heard of during 1895, and to give the usual table, No. 12 in previous reports, with reference to the whole of these cases. The extra work thrown upon the section of the clerical department of this office having charge of the registration of disease, has, however, been so great since notification became compulsory, it has been found impossible to complete the whole of such tables in time for the report. As typhoid fever possessed special interest, an effort has been made to complete the tables dealing with that disease, but the table dealing with the 1,564 cases of scarlet fever, in which the house conditions have been investigated, has been necessarily postponed. The conditions, however, of these 1,564 cases will be found in a generalized form in table 25, and from this table and manuscript notes I deduce what follows in a couple of paragraphs further on.

Under the heading of cases notified (page 36), it was shewn that there were 761 cases of scarlet fever heard of during the eight months of 1894, during which notification was compulsory, and 874 during the fifty-two weeks of 1895. Of these cases, 26 during the former, and 45 during the latter period are not included in the figures given in table 25. Of the 26 in the earlier period, all occurred in some club or public institution of such large size that figures as to the house conditions might mislead, and the result of the examination has not been put in the table. Of these 26 patients, 18 were attacked in the General Infirmary, 3 in the Leeds, 1 in the Hunslet Workhouse, 1 in our own Fever Hospital, 1 in the Leeds Dispensary, 1 in the Leeds Club, and 1 in the Conservative Club. There are, for 1895, 45 cases similarly excluded from the table; of these, 27 were attacked in the Leeds Infirmary, 16 in the Leeds, 1 in the Hunslet Workhouse; the remaining case was one reported from the out-patient department of the Dispensary, and though the house at the address given us was visited, and though we tried repeatedly to get a more accurate address, visiting every house suggested, we could find no trace of the patient. This is the only case out of the 1,635 in which we were able to get no further information about the case.

It may perhaps be mentioned here, however, that where a case was originally reported as scarlet fever, and the diagnosis, to our knowledge, afterwards altered, it has not been counted amongst the 1,635. Leaving these 71 institution cases out, there remain to be dealt with 1,559 patients whose illness was heard of during life, and 5 after death, making 1,564 case-houses.

Through houses, &c.—Of the 1,564 case-houses, 499 in the eight months of 1894, 593 in the fifty-two weeks of 1895, together 1,092, or 69·8 per cent., were back-to-back, salt-pie, or otherwise without through draught. In the latter period of 1894, 236 of the case-houses were throughs, and in the year 1895 the same number, together 472, or 30·2 per cent. of all case-houses.

The reason for keeping distinct the cases reported to us voluntarily, or heard of in consequence of death, from those reported or otherwise heard of under the compulsory system, is pointed out in the report for 1894 (page 75). It is that the differences of the causes leading to notification were so great, that the two classes of figures could scarcely be advantageously compared. On referring to the reports for the years 1891 to 1894 inclusive, we find that the house condition of 1,731 case-houses in which scarlet fever was heard of between the fourth of January, 1891, and the first of May, 1894, were investigated; of these, 613 were through houses. That is to say, 35·4 per cent. of the houses in which scarlet fever cases were notified voluntarily, or in which we learned directly or indirectly that such cases existed, owing to information received from the death returns, or where we were asked, generally through the medical man, to disinfect the house, were throughs. On the other hand, in the cases compulsorily notified, which we may take to represent the average of houses in which scarlet fever occurred, the percentage of through houses was 30·2 per cent., or 5·2 less.

At first sight it could be scarcely expected that one-seventh fewer through houses would have been found amongst those compulsorily notified. It is probable, however, that we have included in previous years a large proportion of the better class houses, for, as said above, we included in our list all houses in which we were asked by medical men to disinfect, and it was

principally the well-to-do persons who were anxious in this way to avoid the spread of infection. Had we included only such cases, the proportion of through houses would probably have been much higher. As, however, we included all cases in which medical men wished us to remove the patients to hospital, and as such cases were generally in an inferior class of house, the number of non-through houses is still considerable. I make this remark at the earliest opportunity I have had to compare the throughs and the non-throughs under the two different systems of notification. It may of course be a pure accident that, during the twenty months in which notification has been compulsory, the number of through houses amongst the case-houses heard of has been so small; but as the numbers dealt with are 1,564 during the compulsory period, and 1,731 during the non-compulsory period, they are at any rate worth recording. The large difference in the percentage of through houses in the two groups justifies their having been treated separately.

The percentage of through houses, out of 375 examined in 1891, was 38·9, out of 823 the following year it fell to 33·8, while out of 320 and 213 in 1893 and the first part of 1894, the percentages were 35·3 and 35·7 respectively. The average of these figures is 35·9, but when the percentage of the aggregate is taken the large number of non-throughs in the year 1892, when nearly half the cases occurred, reduces the actual average to 35·4.

Drainage.—Of these 1,564 case-houses, we have entered 663 (or 42·4 per cent.) as having good drainage, using the term as explained under the head of pneumonia at page 29. Including 7 in 1894, and 9 in 1895, without drain of any kind, we have entered 901 (or 57·6 per cent.) as badly drained. During the 1894 period the proportions were 38·9 per cent. well drained, 61·1 badly drained, while during the year 1895 the percentages were 45·5 and 54·5. That is to say, during the latter portion of the earlier year the badly drained houses figured more prominently than in 1895. Something more may perhaps be said on this matter under local conditions. The actual numbers of case-houses in 1894 were 286 well, and 449 badly, drained, and in 1895, 377 and 452.

Closets.—Counting only one closet for each house, and taking the least sanitary form, 544 or 34·8 per cent. had ordinary water-closets, 409 or 26·2 per cent. had trough latrines, while 611 or 39·1 per cent. had middens or pails. In the eight later months of 1894, the proportions were 35·8 W.C. houses, 25·6 with troughs, and 38·6 middens or pails; in the whole of 1895 they were 33·9, 26·6, and 39·4.

DIPHTHERIA AND CROUP.

Mortality.—During the fifty-two weeks, 39 deaths from diphtheria, 21 of those under, and 18 over, the age of five were recorded. In the first quarter, the numbers were 9 under, and 5 over that period of life; in the second quarter, 1 and 3; in the third quarter, 7 and 3; in the fourth quarter, 4 and 7. The death-rate is equivalent to 0·10 per thousand of the estimated population,—the rates for the several quarters having been 0·14, 0·04, 0·10, and 0·11 respectively. The death-rate of 0·10 from diphtheria is the same as the average from the same cause for the five previous years. The rate had been higher, 0·15, in 1893 and 1894, lower, 0·07, 0·04, and 0·08 in 1890, 1891, and 1892.

These numbers do not include deaths from membranous croup. Of these, during the fifty-two weeks of 1895, there were 30, or at the rate of 0·08 per thousand. There were 16 other deaths from croup, excluding, of course, spasmodic croup, making the death-rate from these two croup groups up to 0·12.

Quarterly, the figures were as follows:—First quarter, 1895, deaths from diphtheria, 14; croup membranous, 11; croup not defined, 3. That is per 1,000 of population, 0·14, 0·11, 0·03, together 0·28. Second quarter, diphtheria, 4; membranous croup, 11; “croup” 4; or per 1,000, 0·04, 0·11, and 0·04, together 0·19. Third quarter, 10, 4, 4; or per 1,000, 0·10, 0·04, 0·04, together 0·18. Fourth quarter, 11, 4, 5; or per 1,000 living, 0·11, 0·04, 0·05, together 0·20. The whole year had therefore, as already said, the following deaths from the three groups, 39, 30, and 16, equivalent to rates of 0·10, 0·08, and 0·04 per 1,000 of the estimated population, together 0·22.

In the first quarter of 1896 the deaths were, from the three groups, 13, 4, and 7, and the rates, 0·13, 0·04, and 0·07 per 1,000 of the population, estimated to the middle of the present year.

During the preceding year (1894 report, p. 76) there had been 60 deaths registered from diphtheria, and 12 from membranous croup, 2 from membranous laryngitis, and 1 from “croup probably diphtheritic”; in all, 75 from the disease, which the Registrar-General now classifies as diphtheria, though he only gave us credit for 73. Against this, last year (1895), there were 69 deaths belonging to this combined group, of which the Registrar-General gives us credit for 65. Our death-rates as published by him, therefore, were, in 1894, 0·19 per 1,000, against an average for the ten preceding years of 0·08, and in 1895 of 0·16, against an average for the ten preceding years of 0·08. The apparent doubling of the death-rate, as compared with the previous decade, is probably due to the fact that, until recently, deaths from membranous croup were excluded from his statistics.

Cases heard of.—During the year 1895, altogether 129 cases of diphtheria, 42 of membranous croup, and 22 of croup, not stated to be membranous, were notified to us in the borough. These cases were recorded in the several quarters of the year as follows:—in the first quarter, diphtheria 39, membranous croup 15, croup not so stated 6; during the second quarter, 14, 15, 10; during the third quarter, 30, 5, and 4; during the fourth quarter, 46, 4, and 5. Taking diphtheria alone, therefore, the first quarter with 39, and the fourth quarter with 46, shewed the largest number of cases. If we add the cases recorded as membranous croup, however, the figures become 54 in the first, 29 in the second, 35 in the third, and 50 in the fourth; the last named quarter shewing more favourably, in comparison with the first, than if we take the cases only reported as diphtheria. During the first quarter of the present year (1896), the cases reported as diphtheria and membranous croup, together amount to 42; 37 of which were notified as diphtheria, 5 as membranous croup. The remaining cases of croup, not distinguished as membranous, were 9 in that quarter.

Examination for diphtheria bacilli.—On the 12th August, 1895, the Committee resolved that as an experiment, the services of Prof. Trevelyan be retained for the examination of material from suspected cases of diphtheria. Arrangements were accordingly made for commencing this examination at the beginning of the fourth quarter. During the remainder of 1895, and the first quarter of 1896, 35 culture outfits were sent by medical men in the town to the laboratory for examination. In 17 of these the diphtheria bacillus was found either by examination of the membrane, the culture jelly, or by recultivation from the secretion. In 16 these processes yielded no result, in 2 the results obtained were doubtful. Generally, therefore, it may be said that in half the cases thus enquired into during the six months it was found that diphtheria really existed. In nearly half there was no direct evidence to be found.

The large number of cases in which the return was incomplete was principally due to the difficulties attending the starting of a new method of observation. The plan adopted was as follows:—A. number of small pasteboard boxes, each divided into two compartments and containing two small test tubes, one charged with agar glycerine jelly, the other with a small copper wire armed with a pledget of cotton wool, and the whole sterilized completely by steam, were sent out and placed under the care of druggists in various parts of the town. A circular was sent out to each medical man in the town stating that these were available, and to be had at such and such places, and explaining the method of use. To each outfit was added a post card which the druggist was requested to send us when any outfit was taken out, and the medical man using an outfit returned it to the pathological laboratory at the Yorkshire College. A report was sent to him by Professor Trevelyan, a copy of which was retained on a counterfoil for the use of our office. From time to time we send round to the several druggists to obtain the unused outfits to be replaced with fresh ones. This is necessary, as the jelly, when too long kept, dries up or turns slightly acid, in either case being unfit for culture.

The process is working now more smoothly and readily than it did at first, and medical men in the town have expressed themselves greatly in favour of its continuance.

HOUSE CONDITIONS.

In some previous years it has hardly been worth while to dwell upon the house conditions in the cases of diphtheria, as the numbers were too small. In the report for 1891, full details as to the house conditions of 112 cases of diphtheria or croup were given in the form of a table, distinguishing cases regarded as diphtheria from those described as croup, and giving details as to each house separately. These cases had been privately notified, or otherwise heard of, during the fifteen months ending 1891. Since that time a more general summary has been given each year in table 25, the croup and diphtheria cases being separated, but no distinction made between membranous croup and cases of croup not so distinguished. These tables brought the cases up to the date when notification became compulsory. Table 25, in the present report, deals, in a similar manner, with the cases reported compulsorily, or otherwise heard of, from the first of May, 1894, to the twenty-eighth of December, 1895. From this table and manuscript notes I deduce the following information.

Through houses, &c.—In the twenty months there were 243 cases of diphtheria heard of,—99 (or 40·7 per cent.) of these lived in through houses, and 144 (or 59·3 per cent.) in back-to-back, salt-pies or single houses without a through draught. The proportion of through houses was 39·8 per cent. in the later months of 1894, and 41·5 during the year 1895.

Of the croup cases, amounting in the two years to 124, 103 lived in houses which had not, 21 (or 16·9 per cent.) in those which had, a through draught—the proportions were 16·0 per cent. in the latter months of 1894, and 17·6 in the whole of 1895.

Taking diphtheria and croup together, and thus dealing with 367 cases in the twenty months, 247 of these lived in houses without, and 120 in houses with, a through draught. That is, 32·7 per cent. only lived in through houses.

Drainage.—The drainage of the houses is divided as good or bad in the manner described under the head of pneumonia, p. 29. Of the 243 diphtheria case-houses in the twenty months, 95 had “good” and 148 “bad” drainage, or in the proportion of 39·1 and 60·9 per cent. In the two years the numbers were as follows:—In the latter part of 1894, 49 good and 59 bad, or as 45·4 and 54·6 per cent., while in the whole of 1895, the numbers were 46 and 89, or 34·1 and 65·9 per cent.

The croup case-houses, numbering 124, had in the twenty months, 46 well, 78 badly drained, the percentages being 37·1 and 62·9. The 50 houses in the latter part of 1894 were divided into 22 well and 28 badly drained, or 44·0 and 56·0 per cent.; while in 1895 the 74 houses were divided as 24 and 50, that is, 32·4 per cent. well, 67·6 badly drained.

Taking diphtheria and croup together, and for the twenty months, of the 367 houses, 141 are placed in the “good,” 226 in the “bad” column, or 38·4 and 61·6 per cent.

Closets.—Of the 243 diphtheria cases heard of in the two years, 109 (or 44·9 per cent.) had inside or outside ordinary water closets, 50 (or 20·6 per cent.) used trough latrines, and 84 (or 34·6 per cent.) used middens or pails. The percentages in the later months of 1894, in the same order, were 39·8, 23·1, and 37·0,—for the whole of the year 1895, 48·9, 18·5, and 32·6.

Of the cases of croup, whether membranous or not, amounting to 124, 41 had ordinary water closets, 41 used trough closets, and 42 middens or pails, and the percentages were 33·1, 33·1, and 33·9. In the latter part of 1894, the numbers were 16, 18, and 16, making up 50, and the percentages 32·0, 36·0, and 32·0; while in the whole of 1895, the numbers were 25, 23, and 26, making up 74, and the percentages 33·8, 31·1, and 35·1. Taking diphtheria and croup together, and for the twenty months, out of 367 case-houses, 150 had water closets, 91 troughs, 126 middens or pails, or, proportionately, 40·9, 24·8, and 34·3 per cent.

Comparison, 1894-1895. — Taking diphtheria and croup together, in the eight months of 1894, the through houses were

32·3 per cent., of the case-houses—in the fifty-two weeks of 1895, they were 33 per cent. The drainage in the eight months of 1894, taking diphtheria and croup together, was “good” in 44·9 per cent.; in 1895 in 33·5 per cent. The houses having water closets of the ordinary type were 37·3 per cent. in 1894, 43·5 in 1895. Houses using trough closets were 27·2 per cent. of the case-houses in the earlier, 23·0 in the later period; those with middens, 35·4 and 33·5. The differences, therefore, were not very great between the two years. While the back-to-back houses predominated a little more in 1894 than in 1895, the badly drained houses predominated considerably more in 1895 than in 1894, and the houses with ordinary water closets were more numerous in proportion amongst the diphtheria and croup cases in 1895, than in the earlier year.*

WHOOPING COUGH.

During 1895, the deaths ascribed to whooping cough were 113, against 131 in the corresponding period of the previous year. Amongst these, 109 were deaths of children under, and 4 over, five, but under ten years of age. In the first quarter of the year the deaths were 19 under, 1 over, five years of age; in the second and third quarters, 18 and 25, in both cases the child's age being less than five; in the fourth quarter, 47 under, 3 over. The last quarter had therefore the heaviest mortality. In the preceding year, the deaths had been, in the first quarter, 52 and 1; second quarter, 38 and 1; third quarter, 15 and 1; and in the fourth quarter, 23 all under the age of five. During the first quarter of the present year (1896), the numbers ran up to 106, amongst which 2 deaths were of patients over the age of five.

The number of deaths in each quarter in the six and a half years since I first reported to you on the fourth quarter of 1889, has thus varied from 16 to 106; the latter number being the highest in any single quarter. I place the figures both under and over five for each of these twenty-six quarterly periods in the form of a table.*

* A comparison between certain conditions of drainage and closets found in various disease groups is entered into under head of “Other Local Factors,” p. 102 *et seq.*

Table showing deaths from Whooping Cough under and over the age of five, with the death-rate at these, and at all ages, for each quarterly period since October, 1889.

Year.	Quarter.	Deaths registered.			Deaths per 1,000 living.		
		Under five.	Over five.	All ages.	Under five.	Over five.	All ages.
1889 ...	IV.	55	1	56	4.95	0.013	0.63
1890 ...	I.	68	3	71	6.01	0.038	0.79
„ ...	II.	53	1	54	4.69	0.013	0.60
„ ...	III.	27	1	28	2.39	0.013	0.31
„ ..	IV. *	28	3	31	2.30	0.035	0.32
1891 ...	I.	31	1	32	2.69	0.012	0.35
„ ...	II.	46	3	49	4.00	0.037	0.53
„ ...	III.	25	1	26	2.17	0.012	0.28
„ ...	IV.	39	5	44	3.39	0.062	0.48
1892 ...	I.	70	—	70	5.98	—	0.75
„ ...	II.	43	1	44	3.67	0.012	0.47
„ ...	III.	26	1	27	2.22	0.012	0.29
„ ..	IV.	17	—	17	1.45	—	0.18
1893 ...	I.	21	1	22	1.76	0.012	0.23
„ ...	II.	33	1	34	2.77	0.012	0.36
„ ...	III.	36	1	37	3.02	0.012	0.39
„ ...	IV.	74	—	74	6.21	—	0.78
1894 ...	I.	52	1	53	4.29	0.012	0.55
„ ...	II.	38	1	39	3.13	0.012	0.40
„ ...	III.	15	1	16	1.24	0.012	0.17
„ ...	IV.	23	—	23	1.90	—	0.24
1895 ...	I.	19	1	20	1.54	0.012	0.20
„ ...	II.	18	—	18	1.46	—	0.18
„ ...	III.	25	—	25	2.03	—	0.25
„ ...	IV.	47	3	50	3.81	0.035	0.51
1896 ...	I.	104	2	106	8.29	0.023	1.06

*The deaths in the fourth quarter of 1890 are for a period of 14 weeks, for every other quarter for 13 weeks. The rates are annual rates upon the populations estimated to the middle of each year.

CONTINUED FEVER.

During the year there were 86 deaths registered from continued fever, of which 85 were returned as enteric or typhoid. The remaining death was that of a child three months old, in the West district, returned as "febricula." This patient was said to have been ill from the time he was vaccinated on the 28th of February. He died on the 16th of March. He was the youngest of a family of eleven, of whom five were under twelve years of age, the ages of others ranging from 14 to 22. The house was a "salt-pie" consisting of a living room, sitting-room, two bedrooms and two attics. All drain wastes were disconnected.

Time incidence.—Deaths. Excepting the death from febricula, mentioned above, six deaths were registered in the first quarter, all of persons over five. They were returned, 3 in the second, 1 in the third, 1 in the sixth, and 1 in the eleventh week of the quarter. In the second quarter there were also 6 deaths, and also all in persons over five. They were returned, one each, in the sixth, eighth, ninth, tenth, eleventh and thirteenth weeks. In the third quarter there were 22 deaths; 3 of children under five, 19 of older persons. Two were returned in the first, 1 in the third, 2 in the fifth, 4 in the sixth, and 2 each in the eighth, ninth, tenth, eleventh and twelfth weeks, and 3 in the thirteenth. In the fourth quarter there were 51 deaths—two of children under five. Three deaths each were registered in the first and second weeks, 4 in the third, 7 in the fourth, 6 in the fifth, 4 in the sixth, 2 in the seventh, 6 in the eighth, 3 each in the ninth and tenth, 4 each in the eleventh and twelfth, and 2 in the thirteenth week of the quarter. These deaths were all returned as due to enteric or typhoid fever.

During the first quarter of the present year (1896), deaths were recorded in the 1st and 2nd weeks (two each); 3rd, 4th, 5th, and 6th (one each); 7th (two); 9th (one); 12th (three); and 13th (one), in all, 15.

Calculated as rates per thousand of the estimated population, the typhoid deaths amounted to 0·06 in each of the two earlier quarters of 1895, 0·22 in the third, and 0·52 in the fourth quarter,

the average for the year being 0·22. In 1894 the rates for the corresponding quarters had been 0·15, 0·08, 0·15, and 0·15 per 1,000 respectively, and the average for the year 0·13. In the preceding year (1893), the rates had been 0·06, 0·06, 0·52, and 0·48, an average of 0·28 per 1,000. In the first quarter of 1896, the rate was 0·15.

Case incidence, 1894 and 1895.—Notification of typhoid fever became compulsory on the 1st of May, 1894. Before that time the non-fatal cases that came to our knowledge were, generally speaking, either those in which the medical attendant had advised removal to our hospital, or cases in which we were requested to disinfect after the recovery of the patient. Any figures, therefore, as to the number of cases reported in each week previous to the 1st of May, 1894, are of very little value as indicating the comparative time incidence of the disease.

Separating the cases during 1894 in the manner already indicated, namely, those heard of before notification became compulsory from those heard of since, there were, as recorded in the report for 1894 (page 80), 34 cases heard of during the part of the year (121 days) before notification became compulsory. Of these, 12 were already dead when notification was received. Of the remaining 22, 16 were removed to our hospital, 6 were not.

During the remaining 243 days of the sanitary year 1894 (ended December the 29th), 212 cases were reported as typhoid (or enteric) fever, and no alteration was made in the diagnosis, and 11 cases were returned as “continued fever.”* Eighty-seven of the above reported as typhoid were removed to and treated in hospital, 125 were not removed, and the 11 reported as “continued” were also not removed. In addition to these, 20 other cases were reported as enteric (or typhoid) fever, of which 19 were removed to hospital, but on further examination it was thought that they were not suffering from that disease.

During the 52 weeks, ended the 28th of December, 1895, 422 cases were reported as enteric (or typhoid) fever, and 21 as “continued” fever* Thirty-four other cases were also notified as

* Where a case was reported as “continued,” and afterwards proved one of typhoid, fever, it is counted as if notified as typhoid from the first.

typhoid, and one as continued, fever, but there was reason afterwards to reconsider the diagnosis.* The 21 other cases of “continued fever” were all left at home, and we have no information about any alteration of diagnosis. It is probable that most of these were really cases of typhoid. Of 178 cases reported during 1895 as enteric (or typhoid) fever, and taken into hospital, 33, or 18·54 per cent., turned out not to be typhoid, and this number is exclusive of two cases in which the resident medical officer, during life, could find no symptoms of typhoid, but in which he refrained, after death, from altering the original diagnosis. If the same proportion of errors occurred amongst the cases left at home, 51 out of the 277 returned as typhoid were probably not so. We may, therefore, safely leave the 21 returned as continued fever, and left at home, out of the calculation. The following figures deal with cases only as finally diagnosed.

Cases removed to hospital, several quarters, 1894.—In the first quarter of 1894, that is the thirteen weeks ended March the 31st, during no part of which was notification compulsory, leaving out any cases in which the diagnosis was afterwards altered, 19 cases of enteric (or typhoid) fever had been heard of. Fifteen were sent to hospital, 4 left at home. During the second quarter, that is the thirteen weeks ended June the 30th, 29 cases were heard of. Three of these came to our knowledge before the 1st of May, that is during the 30 days of April, one being sent to hospital and the other two left at home. Of the 26 reported to us during the 61 days of May and June completing the quarter, 7 were taken into hospital and 19 not. Six cases were also reported as “continued fever” but left at home. During the third quarter (thirteen weeks ended September 29th) 108 cases were heard of, exclusive of 3 returned as “continued fever.” Forty-five were removed to hospital, 63 not, and the 3 cases of “continued fever” were also left at home. During the fourth quarter (thirteen weeks ended December 29th) 78 cases were heard of, exclusive of 2 returned as continued fever. Thirty-five were sent to hospital, 43 left at home. The two cases of “continued fever” also remained at home.

* With one exception these all occurred amongst patients who were taken to hospital.

Cases removed to hospital, several quarters, 1895.—In the first quarter of 1895, 16 cases were returned as enteric fever and one as continued; the latter patient afterwards died, and death was certified as due to typhoid. Of the 16 cases regarded in the first instance as typhoid, 5 were sent to hospital and 11 left at home. In the second quarter, 17 cases were reported as typhoid and removed to hospital, 18 so reported but not removed. The 17 include one of the two cases already mentioned in which the diagnosis inside the hospital was influenza, but the death was certified as due to typhoid. Two cases (Z. 778: 5, and Z. 779: 2) were reported as “continued fever” in the week ended June the 1st, but we have had no subsequent history as to what was really the matter with the patients. In the third quarter, 125 cases were reported as enteric, 46 were removed to hospital, 79 not removed. Five other cases were reported as “continued fever,” and no accurate diagnosis afterwards communicated to us. In the fourth quarter the number of cases rose to 246, of which we had only room for 77 in our hospital. One of these 77 was the second of the two cases returned as typhoid, although the hospital diagnosis was “apical pneumonia.” There were, in addition, 13 cases reported as “continued fever” as to which no more accurate diagnosis was given us.

Cases, first quarter, 1896.—There were 59 cases of typhoid and one of “continued fever” heard of during the first quarter of 1896. Of these, 22 were taken to hospital, 37 typhoids and the one continued left at home. There were seven cases in the first, and 8 in the second week, then fewer. In the 9 and 10 weeks they again rose to 6 and 7, falling again to the close of the quarter.

Special case incidence latter part of 1895.—In the third quarter, the cases of typhoid (or enteric) fever reported in the first, second, third, fourth, and fifth weeks were 3, 5, 3, 4 and 6 respectively; the average weekly number in the previous quarter having been 2.61. In the four following weeks, ended August 10th, 17th, 24th, and 31st, the typhoid cases reported were 9, 12, 4 and 6 respectively, an average of 7.75 per week. In the four following or September weeks of the quarter, the cases were 9, 14 (and 1 continued fever),

28 (and 1 continued fever), 25 (and 1 continued fever), an average of 19·0, or, with the cases of continued fever, 19·75. During the fourth quarter, in the 5 weeks of October, the numbers were 17, 15, 33, 33 and 23, exclusive of 3 continued fever cases in the second, 2 in the third, and 1 each in the fourth and fifth week. In November (4 weeks) the typhoids were 22, 19, 21 and 17. Three cases of continued fever were reported in the first, and 1 in the fourth, of these weeks. In December the numbers of typhoid cases were, in the several weeks, 11, 15, 9 and 7. There was 1 case of continued fever reported in the second, and 1 in the fourth, of these weeks.

It is thus evident that there was a steady increase in the number of cases from the beginning of the third quarter, reaching a maximum towards the end of September. The cases were 28 in the third, and 25 in the fourth, week of that month, after which there was a fall of the number of cases reported for a fortnight, when a still higher maximum was obtained in the third and fourth weeks of October, the numbers remaining high up to the week ended November 9th, continuing (though less so) still high through the rest of the month and falling during December.

The September maximum.—As just said, the first maximum was in the latter half of September. In the week ended 21st there were 29 cases reported, 12 of them on the Friday (the 20th). No case was reported on the Saturday or Sunday following (21st and 22nd). The 26 cases in the following week were pretty evenly distributed over the whole week, Monday and Tuesday having a slight preponderance, but three cases even being reported on the Saturday. On Sunday, the 29th, no cases were, of course, heard of, but 6 were reported on the following day, after which the daily reports became less frequent during the rest of that week. It may therefore be considered that the week ended September the 28th, and the latter part of the week ended the 21st, showed this earlier maximum of reported cases.

Conditions preceding September maximum.—The average length of time from the commencement of the illness to our hearing of a case, while still alive, was twelve days. If we consider the average

incubation period as another twelve days, this would throw the probable period of infection to about the week ended August the 31st.

At this time the barometer stood at 29·83, having held about that position for a fortnight. This is a little higher than the average of the third quarter, although not quite so high as the average of the second. The average of the ten and four o'clock temperature of that week (ended August 31st) stood at 63·5° F., a little below the average for the quarter, but the preceding week had an average ten and four o'clock temperature of 68·6, following upon temperatures for the two preceding weeks of 65·1 and 65·9. The humidity in that week (ended August 31st), calculated upon the ten and four o'clock temperatures of dry and wet bulbs, was 68·5‰; higher than since the week ended July 27th. The mean of the highest thermometer readings in the week was 67·1°. This is below the average of the quarter, but it followed a week with a mean of maximum temperatures of 73·3°. The mean of the minimum temperatures, during the week ended August 31st, was 55·7, following two weeks in which it had been 56·3 and 56·7 respectively, while the daily range of temperature in this week fell to 11·4°, having been 16·6° the preceding week.

Half-an-inch of rain fell in the last week of August. In the preceding week there had been only eight hundredths. There had been comparatively little rain during the preceding three weeks, but a considerable rainfall, due principally to thunder showers, during the week ended July the 27th (4·20 inches), and a smaller but still considerable quantity (1·43 inches) the previous week. On Thursday, July 18th, the gauges at the Museum in Park Row, at Cliff Road, and at Adel, registered, respectively, ·91, ·81, and ·70 inches; on Sunday, July 21st, 1·44, 1·32, and 1·43 respectively; while on Thursday, Friday, and Saturday, 25th, 26th, and 27th, the records were 2·13, 1·75, and 1·64. The rainfall in the week ended September 7th was 1·08; 0·62 inches having fallen on Friday the 6th. The wind during the week ended August 31st was principally from the S.W. It had pretty well boxed the compass during the preceding weeks, but had at no time had great force.

It may, therefore, be considered that the conditions present were those of anti-cyclone, with an increase during the particular week (ended August 31st) in the amount of moisture in the air accompanying a slightly decreased diathermancy of the atmosphere. The drains in the town which had been naturally flushed on the 18th and 21st of July, and again during the concluding days of the week ended the 27th, were getting dry, and the week was the one which followed, what had been up to that period, the week of highest mean maximum temperature.

The October maximum.—The next maximum of cases occurred in the weeks ended October 19th and 26th. In the first of these there were 33 typhoids and 2 cases of “continued fever”; in the second, 33 cases of the former disease and one case of continued fever. On the 14th, 15th, and 16th of October, there were 5, 11, and 8 cases respectively. On the 17th and 18th, each 3. On the 19th, 5; the 20th, Sunday, was a blank day, but on the Monday, 14 were notified.

It is probably, therefore, around the week ended September the 21st, that the meteorological elements are of most importance. The barometer had continued to climb up to a mean of 30 inches, which it reached in this week and the week following. This of course is the uncorrected reading. The average ten and four o'clock dry bulb temperatures were $60\cdot6^{\circ}$; the week before $62\cdot9^{\circ}$; the week after $65\cdot7^{\circ}$. The humidity calculated from observations at the same hours was 70·5 per cent. of saturation, having been 68·1 the preceding week and rising to 73·8 the following. The mean of the lowest readings was $51\cdot6^{\circ}$, having fallen from $55\cdot7$ in the week ended August the 31st to $54\cdot1$, and $51\cdot9$ in the two succeeding weeks. It fell still further to $49\cdot6$ in the week ended September the 28th. The daily range of temperature, $14\cdot7^{\circ}$, was again lower than in the two preceding weeks, $15\cdot4$ and $15\cdot9$, but not so low as in the week ended August 31st ($11\cdot4$). There had been no rain during this week, only the twentieth of an inch the preceding one, but there had been just over an inch the week before. The week ended September 28th was also rainless. The wind was principally westerly, but varied in direction some 180° , and was

not strong. The conditions were again those of anti-cyclone, with a comparative increase in the amount of moisture and a diminution in the diathermancy of the atmosphere.

Causation.—In other words, on both occasions, the effluvia generated in putrefying material by warmth and moisture were prevented by the heavy state of the atmosphere from getting away. The element, of course, of infection from patient to patient to some extent complicates matters, and especially in the later cases. During the weeks ended September 21st and 28th, 8 out of 55 cases were reported in houses in which previous cases had occurred, whilst in the weeks ended 19th and 26th of October, again 8, but this time out of 69 cases, were in houses previously infected, while during the two following weeks ended 2nd and 9th of November, out of 49 cases reported, 6 were in houses previously infected.

Table showing cases of Typhoid (=enteric) fever, heard of during 1894-5 (notification period), and during recent pre-notification periods—how dealt with—and average duration of illness before information reached us.

Periods.	Total cases.	Average days till heard of.	Hospitalled.		Not hospitalled.		Already dead.	
			Cases.	Average days till heard of.	Cases.	Average days till heard of.	Cases.	Average days till heard of.
Notification period, 1894-5 ... (607 days)	645	12·5	232	11·3	402	12·5	11	40·4
Pre-notification period, 1894 (121 days)	34	15·2	16	12·0	6	16·2	12	19·0
Pre-notification period, 1893 (364 days)	373	17·7	186	9·5	121	26·1	66	25·9
Pre-notification period, 1892 (364 days)	188	17·4	100	10·4	56	24·5	32	26·8
Pre-notification period, 1891 (364 days)	260	17·3	162	11·8	59	26·5	39	27·8
Total Pre-notification period.	855	17·4	464	10·6	242	25·6	149	25·6

Removal to hospital.—From the foregoing, and from the reports for 1891 to 1893, it will be evident that the number of cases of typhoid fever removed, in proportion to the whole heard of during life, was much smaller after the introduction of notification than before. (See table, p. 56.)

During the latter part of the year 1894, and the whole of the sanitary year 1895, a period of 607 days, we heard, altogether, of 645 cases, excluding cases certified as “continued fever,” and in which the diagnosis of typhoid fever was not afterwards made. Eleven of these 645 cases we heard of for the first time after the death of the patient. Of the remaining 634, 232 (or 36·6 per cent.) were removed to hospital, 402 (or 63·4 per cent.) were left at home.

During 1893 and the pre-notification period of 1894, 409 cases of typhoid came to our knowledge, 80 only after death. Of the remaining 329 heard of during life, 202 (or 61·4 per cent.) were removed to hospital, and 127 (or 38·6 per cent.) left at home.

During the years 1891 and 1892, 449 cases of typhoid were heard of, 71 of them after death. Of the remaining 378, 263 (or 69·6 per cent.) were removed, and 115 (or 30·4 per cent.) not removed to hospital.

So that of 707 typhoid cases heard of during life, from the 4th of January, 1891, to the 30th of April, 1894, before notification became compulsory, 65·8 per cent. were sent to hospital, 34·2 per cent. left at home. This is almost the opposite of what has occurred since the introduction of notification, when, as just said, of 634 cases heard of during life, 36·6 per cent. were admitted to hospital, and 63·4 not. It must, however, be remembered that a considerable number of cases during the third and fourth quarter of 1895 would have been admitted to hospital had we had room for them, and that even amongst those admitted, our hospital mortality was somewhat increased by our not having being able to take cases early enough. (See table, p. 56.)

Age incidence. —Of the 645 cases of typhoid* heard of, dead or alive, during the 607 days from the 1st of May, 1894, to the

* Excluding cases certified as continued fever, and in which no more exact diagnosis was afterwards communicated to us, and excluding cases certified as typhoid in which the diagnosis was afterwards altered.

TABLE 14.
Typhoid Fever.—Cases and Case-houses. 607 days ended December 28th, 1895.

REGISTRATION DISTRICT.	AGES OF CASES.						SEX.		DAYS FROM ATTACK TILL HEARD OF.			AT SCHOOL.		HOUSES		DENSITY OF POPULA- TION.		DRAINAGE.												CLOSETS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
							M.		F.		REMOVED			HOME.			DEAD.			11		12		13		INMATES.		ROOMS.		DISCONNECTED.		NOT DISCONNECTED.		INSIDE.						OUTSIDE.				W.C.			J.W.C.			M.		PAIL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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0-1	1-5	5-15	15-25	25-60	60+	8	9	10	a	b	c	43	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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T.—Trapped and then going directly into drain. C.—Cut off over an outside gully. T.C.—Same, plus an inside trap. D.—Directly connected with sewer.
F.V.—Soil pipe continued full size above the eaves. T.W.C.—Trough water closet. M.—Midden. See note and text.

NOTES TO TYPHOID FEVER TABLE.

The information in this table (except under the head of density of population) refers to "case-houses," the facts about the same house being repeated for every case known to have occurred in it during the period. Of the 645 cases, eleven occurred in public institutions, and one in a house in the *Kirkstall* district, about which complete information was not obtained. While, therefore, the ages, sexes, and days from attack till heard of columns deal with the full 645 cases heard of, including these 12, the remaining groups of columns (excepting, of course, columns 14 and 15) deal with 633 cases or case-houses.

Days from attack till heard of.—This column gives, for each district, the average length of time from the commencement of the symptoms to the date when information of the case reached our office, distinguishing those taken to hospital, left at home, or dead, before information about the patient reached our office.

Houses.—Column 12 deals with 437 houses, of which 405 were back-to-back, 14 salt-pie, and 18 single houses without aperture in the rear wall. Of the latter, 9 occurred in *Wortley*, 3 in *Bramley*, 2 each in the *South-East* and *Hunslet*, and 1 each in the *North* and *West*, districts. The salt-pies occurred—7 in the *West*, 4 in the *North*, 2 in *Wortley*, and 1 in the *Hunslet* district. The remaining 196 (given in column 13, and making up the 633) were through houses. Of the actual houses, as distinguished from the case-houses, 358 were back-to-back, 12 salt-pie, and 17 single houses without a through draught. One house in *Wortley* belonging to the not through single houses had two cases. Amongst salt-pies one house in *North* district had three cases. Back-to-backs—*North*, 1 four-, 1 three-, 9 two-case houses; *West*, 1 five- and 6 two-case houses; *South-East*, 1 three-case house; *Hunslet*, 4 two-case houses; *Holbeck*, 2 two-case houses; and *Wortley*, 1 four-, 3 three-, and 6 two-case houses. Throughs—*North*, 1 two-case house; *West*, 2 two-case houses; *South-East*, 1 four-case house; *Hunslet*, 1 four-, 1 three-, and 3 two-case houses; *Holbeck*, 1 two-case house; *Wortley*, 1 five- and 3 two-case houses; *Kirkstall*, 1 six- and 1 two-case house; and *Chapeltown*, 1 three-case house.

Density of Population.—The number of inmates or rooms is not recounted where a second case occurred in the same house. The figures given deal with 553 houses, in which 633 cases occurred.

Drainage disconnection.—Two hundred and forty-nine case-houses were disconnected, 372 not disconnected, and 12 had no drain. The corresponding actual houses were 218, 328, and 7.

Sink wastes.—Twelve houses had no sink. Of these, 7 were in the *Kirkstall*, 2 in the *North*, and 1 each in the *South-East*, *Hunslet*, and *Wortley*, districts. There was more than one sink in 81 case-houses, corresponding to 75 actual houses, the actual number of extra sinks being 79, increased to 85 by counting as in case-houses.

Other inside drainage.—Every exit of waste water from the house to the drain, other than the sink, is included in these four columns, but many houses had no other inlet to the drain. These columns, consequently, will not balance the number of houses.

Outside drainage.—The last remark also applies to columns 28 and 29. Columns 26 and 27 (fall-pipes) will balance if 24 houses in the *North*, 22 in the *West*, 12 in the *South-East*, 16 in the *Hunslet*, 6 in the *Holbeck*, 17 in the *Wortley*, 8 in the *Kirkstall*, and 1 in the *Chapeltown* district, which had no fall-pipe on the house itself, be added. No second fall-pipe on the same house is counted.

Closets.—Each case-house is regarded as having only one closet, the least sanitary one being chosen. Seventeen case-houses had 17 extra closets, distributed as follows:—7 water-closet F.V., 1 not F.V., 8 water-closets outside, 1 midden. In *North* district outside water-closet in house entered under midden. In *West*, in each of three houses under heading Not F.V. an extra outside water-closet, and under heading Midden, an extra F.V. in one, a not F.V. in a second, and in the third, a two-case house, an inside F.V. closet. In *South-East*, under F.V., an outside water-closet, and under Midden, an F.V. closet. In *Hunslet*, under Midden, an F.V. In *Wortley*, under Not F.V., a midden. In *Kirkstall*, under F.V., two, with outside water-closets, and under Midden, an F.V. In *Bramley*, under F.V., an outside water-closet, and in *Chapeltown*, under Midden, an F.V.

TABLE 14a.
Continued Fever.—Cases and Case-houses. 607 days ended December 28th, 1895.

REGISTRATION DISTRICT.	AGES OF CASES.						SEX.		DAYS FROM ATTACK TILL HEARD OF.			AT SCHOOL.		HOUSES.		DENSITY OF POPULATION.		DRAINAGE.												CLOSETS.											
	0-1	1-5	5-15	15-25	25-60	60+	M.	F.	REMOVED.	HOME.	DEAD.	11	12	13	INMATES.	ROOMS.	DISCONNECTED.	NOT DISCONNECTED.	INSIDE.						OUTSIDE.						F. V.	F. V. Not	INSIDE.	W.C.	F. W. C.	M.	PAIL.				
																			SINK.			OTHER.			FALL PIPE.			OTHER.													
																			T.	C.	T.C.	D.	T.	C.	T.C.	D.	D.	C.	D.	T.								C.	T.	F.	
																																									OTHER.
COLS. I	2	3	4	5	6	7	8	9	10	a	b	c	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
NORTH	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
WEST	...	3	3	2	5	...	9	4	...	11.5	...	...	9	4	...	4	60	46	1	12	12	...	1	...	...	3	...	...	8	1	1	...	...	3	4	...	...	...			
SOUTH-EAST	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
HUNSLET	...	...	2	1	1	...	2	2	...	9.8	...	...	3	1	...	2	22	19	2	2	2	...	2	...	...	...	1	...	4	...	...	...	...	1	...	...	...	...	...		
HOLBECK	...	1	...	1	4	...	4	2	...	15.7	...	...	6	...	...	14	23	14	2	4	4	1	1	...	...	...	...	...	4	1	...	...	...	...	1	...	...	...	...		
WORTLEY	...	...	...	...	1	...	1	...	...	9.0	...	...	1	...	...	3	2	3	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
KIRKSTALL	...	...	...	2	2	...	3	1	...	16.0	...	...	4	...	...	15	20	15	2	2	2	...	2	...	...	1	...	1	3	1	...	...	...	...	...	...	...	...	...	...	
BRAMLEY	...	...	...	1	...	...	...	1	...	7.0	...	...	...	1	...	6	7	6	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
CHAPELTOWN	...	...	1	...	...	...	1	...	...	5.0	...	...	1	...	...	3	7	3	1	...	...	...	1	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	
OSMONDTHORPE	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
TOTALS	...	4	6	8	14	...	20	12	...	13.0	...	...	25	7	...	153	114	10	22	21	1	9	1	2	...	5	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...

T.—Trapped and then going directly into drain. C.—Cut off over an outside gully. T.C.—Same, plus an inside trap. D.—Directly connected with sewer.
F.V.—Soil pipe continued full size above the eaves. T.W.C.—Trough water closet. M.—Midden. See note and text.

NOTES TO TABLE 14A.

The information in this table which refers to cases notified as continued fever, but does not include the death from febricula mentioned at page 49 in the text, refers to "case-houses" (except in columns 14 and 15), the facts about the same house being repeated for every case which occurred in it.

Days from attack till heard of.—This column gives for each district the average length of time from the commencement of the symptoms to the date when information of the case reached our office.

Houses.—Column 12 deals with 25 houses, all of which were genuine back-to-backs. The remaining 7 in column 13 (making up the 32) were through houses. The actual houses were 24 and 7 respectively. One house in the *West* registration district, belonging to the back-to-backs, had two cases.

Density of population.—The number of inmates or rooms is not recounted where a second case occurred in the same house. The figures given deal with 31 houses, in which 32 cases occurred.

Drainage disconnection.—Ten case-houses were disconnected, and 22 not disconnected. The corresponding actual houses were 10 and 21. The two-case house had sink T, fall-pipe S, a midden about 5 yards away, and, as already said, was a back-to-back.

Sink Wastes.—All the 32 case-houses had sinks. There was more than one sink in 5 case-houses, corresponding to 5 actual houses, the actual number of extra sinks being 7, one house in the *West* having no fewer than four sinks.

Other Inside Drainage.—Every exit of waste water from the house to the drain, other than the sink, is included in these four columns, but many houses had no other inlet to the drain. The figures in these columns consequently will not balance the number of houses.

Outside Drainage.—The last remark also applies to columns 28 and 29. Columns 26 and 27 (fall-pipes) will balance if 4 houses in the *West*, and 1 each in the *Holbeck*, *Wortley*, and *Chapeltown* district, which had no fall-pipe on the houses themselves, be added. No second fall-pipe on the same house is counted.

Closets.—One single case-house in the *West* district, entered under column 31, had an additional closet of the same kind.

end of the sanitary year 1895 (December 28th), 2 (or 0·3 per cent.) were under one year of age, 41 (or 6·4 per cent.) between one and five, 182 (or 28·2 per cent.) between five and fifteen, 208 (or 32·2 per cent.) between fifteen and twenty-five, 199 (or 30·9 per cent.) between twenty-five and sixty, and 13 (or 2 per cent.) above that age. If we add the 32 cases of continued fever, of which 4 occurred at the second, 6 at the third, 8 at the fourth, and 14 at the fifth of these age periods, the percentages are not much altered. They become, for those under one and under five respectively, 0·3 and 6·6; for the two following periods, 27·8 and 31·9; for the period twenty-five to sixty, 31·5, and for the concluding period, 1·9.

Calculated upon the population of the City at these several age groups, estimated to the middle of 1895, the sickness rate per thousand* becomes, for the typhoids, and the typhoids and continueds together, as follows: under one, 0·18 per thousand in both cases; one to five, 1·08 and 1·18; five to fifteen, 2·07 and 2·14; fifteen to twenty-five, 2·57 and 2·66; twenty-five to sixty, 1·29 and 1·38; sixty and upwards, 0·61 in both cases.

It is evident, therefore, that the attacks were most frequent between the ages of fifteen and twenty-five, that they were more frequent between five and fifteen than over twenty-five, that they were more frequent amongst persons twenty-five to sixty than amongst children from one to five, and more frequent over sixty than under one year of age. It will be noticed that the addition of the continued fevers simply emphasises the number of attacks at the ages most subject to the disease, and in no way alters the proportion at each group. These numbers are calculated as if all the cases had occurred in one year; this, however, was not the case; the greater number of the cases that occurred in two years are here. It would obviously be inaccurate to calculate these rates simply on the time during which these cases were reported, as it includes two autumns and only one spring. It would, therefore, probably be more nearly correct to divide these rates by two than

* This is not per 1,000 per annum. The cases include the greater number heard of in two years, but as notification was not compulsory during the whole of the two years, a useful annual rate is not obtainable. See note later.

to calculate them upon the actual time period. As it is impossible to get an accurate result, I prefer leaving them in this way. They represent the proportion of cases which occurred in these twenty months to the population of 1895; they are not, however, to be regarded as annual rates.*

Sex incidence.—Of the typhoid cases heard of from May 1st, 1894, to December 28th, 1895, 338 were of the male, 307 of the female, sex, or 52·4 and 47·6 per cent. respectively. Adding the continued fevers, the percentages become 52·9 and 47·1.

In the eight months of 1894 the typhoid cases were 115 male and 104 female, and the continued fevers, 7 and 4 in addition. In the year 1895 the typhoid figures were 223 male and 203 female, the continued fever cases, 13 and 8

Days from attack till heard of.—This is the first time that I have reported fully upon typhoid fever since notification came into force. It has been already said that the number of patients who died in the twenty months, without our having had a previous report, was only eleven.

The average time at which we heard of 232 patients, whom we were able to remove, was 11·3 days. The additions of the continued fever cases does not alter the period. The patient whom we left at home we heard of at a very similar average of 12·4, or, including the continued cases, 12·5 days. The 11 patients, of whom we heard nothing beforehand, had been ill an average of 40·4 days before the intimation reached us through the death returns.

In 1893, out of 186 cases reported and removed, the average date on which we heard of the illness was 9·5 days. As pointed out at the time, that was nearly a day less than the period for 1892, and two days less than for the corresponding period of 1891. In 121 cases, where we did not remove the patient in 1893, the

*Taking only the cases coming to our knowledge during 1895 (during the whole of which notification was compulsory, but which was a year in which typhoid was more prevalent than usual), the rates are as follows, per thousand per annum of the estimated population: under one, 0·18; one to five, 0·79, and with continued fever, 0·81; five to fifteen, 1·25 without, and 1·30 with continued fever; fifteen to twenty-five, 1·68 without, and 1·74 with; twenty-five to sixty, 0·91 without, and 0·98 with; sixty and upwards, 0·47.

average duration before we heard of his illness was 26·1 days ; in 1892 the average previous length of illness was 24·5, and in 1891, 26·5. Amongst the cases heard of only after death, which in 1893 formed 17·7 per cent. of the cases we knew anything about, the duration previous to notification was 25·9 days, against 26·8 days in 1892, and 27·8 days in 1891.

From the table on page 56, it will be seen that while the average illness before removal of hospitalised cases remains practically as before, the duration before notification of not removed cases has fallen enormously. The few cases in the 20 months where death occurred before notification, does not greatly affect the figures. Taking the whole 645 typhoid cases, the average duration before they were heard of was reduced under notification to 12·5 days, too long for an average period, but an enormous improvement on what used to be. The more numerous cases now heard of come to our knowledge an average of 5 days earlier than the smaller number we heard of in pre-notification days.

School attendance.—It has been seen that, of the typhoid cases reported in the twenty months, 182, and of the continued fever cases 6, were between the school-going ages of five and fifteen. One hundred and fifty-seven of the typhoid cases investigated were found to be in attendance at school, and 7 of those returned as continued fever.

HOUSE CONDITIONS.

Of the 645 typhoid cases heard of in the 607 days of 1894-5, after notification was made compulsory, 11 occurred in public institutions, and information was refused us in a twelfth case, leaving 633, as to the house conditions of which we have full information. In a similar way we deal with 32 cases of “ continued fever ” (tables 14 and 14a).

Through houses, &c. —One hundred and ninety-six of the patients lived in through houses, 405 in back-to-backs, 14 in salt-pies, 18 in single houses, without a through draught, a total of 437 in “ not throughs.” That is to say, 64·0 per cent. lived in back-to-back houses, 2·2 per cent. in salt-pies, 2·8 per cent. in single houses, not through, making a total of 69 per cent. in houses not

through, while 31 per cent. lived in through houses. If we add the case-houses in which the 32 "continued fevers" occurred, the not through houses rise to 69·5, the through fall to 30·5.

Inmates and rooms.—The 633 typhoid cases occurred in houses in which there were, altogether, 3,095 inmates; but as 81 occurred in houses in which other cases existed, the number of houses in which these 3,095 inmates lived was 553, an average of 5·60 inmates per house. In the same 553 houses there were 2,218 rooms, an average of 4·01 rooms per house, and therefore of 1·40 inmates per room.

Adding the 31 actual houses in which the 32 "continued fever" cases occurred, and in which there were 153 inmates and 114 rooms, the number of persons in a house becomes 5·56, of rooms, 3·99, and of persons per room, 1·39, the addition making only a very slight difference.

Disconnection of drains.—In the 633 case-houses, 12 (or 1·9 per cent.) had no drain, 249 (or 39·3 per cent.) had every drain cut off, while 372 (or 58·8 per cent.) had drains not thoroughly disconnected from the sewer. In considering these numbers, however, it must be remembered that if a house had a water-closet the soil-pipe of which was not thoroughly ventilated, or a gully in the basement not disconnected from the sewer, it was put into the category of "not properly drained," whatever the condition as to efficiency of the drains such as they were.

If to the 633 typhoid case-houses we add the 32 in which "continued fever" was reported, we get a total of 665, of which 12 (or 1·80 per cent.) had no drain, 259 (or 38·95 per cent.) were disconnected, while 394 (or 59·25 per cent.) had their drains not properly severed.

It will be noticed, therefore, that, counting the typhoid case-houses without sink as badly drained, the drainage was structurally at fault in 60·7 per cent., while it was planned on correct principles only in 39·3. If, however, we add the "continued fever" cases, the badly drained case-houses become 61·1 per cent., and those with the drainage properly constructed 38·9.

Sink wastes.—As already said, 12 (or 1·9 per cent.) of the 633 typhoid case-houses were without sink. In 9 (or 1·4 per cent. of the 633) the sink waste went directly into the sewer. In 2 (or 0·3 per cent. of the 633) it went into the sewer through a box-trap, in 277 (or 43·8 per cent.) through an S trap. In 67 (or 10·6 per cent.) there was both an S trap and a box-trap. The proportions amongst the latter classes are not very certain, as a box-trap might easily be overlooked; but in the whole group of 355 houses with sinks (or 56·1 per cent. of the 633 case-houses with or without sink), the sink waste went to the sewer undisconnected—sometimes without even a trap. In the remaining 266 (or 42·0 per cent. of the whole group) the sink waste was cut off outside the house over a gully trap. In all but 8 (1·26 per cent.)—that is in 258 (or 40·8 per cent. of the whole)—there was an inside trap upon the waste before it went outside the house.

Adding the “continued fever” cases, the numbers, including the 2 with box-trap only, become 294 trapped, but not cut off; 73 with an S and box-trap; altogether 367 (or 55·2 per cent. of the 655) in which there was a trapped connection to the sewer. In one of the “continued fever” case-houses there was an untrapped connection to the sewer, making the 9 D’s into 10 (or 1·5 per cent. of the whole). Of the remaining 10 “cut-off” continued fever case-houses, one was C. and 9 T.C., making 276 (or 41·5 per cent.) with properly disconnected sink wastes. The remaining 12 houses (or 1·8 per cent.) had no sink. The addition of the continued fever cases slightly reduced the percentage of houses with drains properly constructed.

Other inside drainage.—In 19 instances there were drains, other than the sink pipe, not cut off from the sewer, 2 going directly to the sewer, 17 through a trap. Some of these faults were in the same, some in different houses.

Seventy-four other drains in houses were “cut off,” 2 without inside traps, 72 with. Some houses had no drain, other than the sink, and some had more than one sink or more than one other drain.

Amongst the 32 case-houses in which continued fever were reported, there were 2 other drains trapped, but not severed from the sewer, and 5 other drains trapped and cut off. Not counted in these extra drains were 85 extra sinks (in 81 case-houses) not included in the table; 31 trapped but not cut off, 3 cut off, 51 both trapped and cut off. In each case the house was classed according to the worst form of sink found in it. In the same way amongst the continued fever cases, there were 7 extra sinks in 5 case-houses, 2 trapped but not cut off, 5 trapped and cut off.

Outside drainage.—Of the 633 typhoid case-houses, 106 (or 16·7 per cent.) had no fall-pipe on the house itself. In most cases the fall-water went down the pipe of a neighbouring house. In 95 (or 15·0 per cent. of the whole 633), the fall-pipe was cut off from the sewer, while in 432 (or 68·2 per cent.) the fall-pipe was not severed from the sewer, but connected as a ventilator to the drain, and capable of carrying sewer gases to the under surface of the slates. Amongst the 32 “continued fever” case-houses, 5 had fall-pipes cut off, 20 not cut off, and 7 had none. Of the actual fall-pipes, however, it will be noted that 82·0 per cent. (or with the continued fever cases, 81·9) were not disconnected, while only 18·0 (or with the continued, 18·1) per cent. were. Other information will be found in the notes to the table.

Closet accommodation.—As to closets, 172 of the typhoid case-houses (or 27·2 per cent.) had water-closets. Of these, 47 (7·4 per cent. of the 633) were inside, 18 (2·8) F.V., 29 (4·6) not F.V., the remaining 125 (19·8) being outside water-closets, of which no note was taken of the ventilation of the soil-pipe. Trough latrines were in use in 179 (or 28·3 per cent.), 281 (or 44·4 per cent.) had middens or pails,—the former, 277 (43·8), the latter, 4 (0·6). The remaining case-house (0·16 per cent. of the 633) had no closet of any kind.

If to these we add the closets in the 32 “continued fever” case-houses, the proportion of the water-closet houses is slightly increased to 27·7 per cent., of which 2·9 were inside F.V., 4·8 inside “not F.V.,” 20·0 outside; the trough water-closet houses fall

to 28 per cent., those with middens or pails, together, fall slightly to 44·2 per cent., 43·6 the former, 0·6 the latter; while the single case-house without a closet becomes 0·15 per cent.

General sanitary conditions.—Two hundred and sixty-one typhoid case-houses had all their ordinary wastes disconnected from the sewer, but 12 of them had, inside the house, water-closets of which the soil-pipe was not fully ventilated (not F.V.), leaving, as already shewn, 249 typhoid case-houses, in which the severance from the sewer was complete. Of these, however, 7 were dirty. Four of these dirty houses were also overcrowded, and another, not regarded as dirty, was also overcrowded, that is, had more than three inmates per room. Nineteen had a midden not more than three yards from the house, making, together, 27 case-houses defective in one of these respects, and leaving 222, or, 35·1 per cent. of the whole 633. In previous years I have drawn attention to the fact that the absence even of all these objectionable conditions does not give a clean sanitary bill to the house. Of the 27 “cut offs” just excluded, 4 of the 19 with middens too near, and 20 of the remaining 222 also “cut off” and otherwise apparently sanitary, were discovered, on testing, to have communication between the inside of the house and the drains. Twelve others, 2 of them included in the 27 on account of the nearness of the middens, and 10 in the remaining 222 had other defects as follows. In 3 of them, drainage defects were discovered otherwise than by the tests. Of these three, in one case (Z. 694·4) the joints of the sink waste were found by the inspector to be open, and there were also other drain defects. In a second (Z. 883·9), in which the drains had been dug down to on the outbreak of typhoid fever, things had been wrong a fortnight previous to our visit, that is presumably about the time the infection was received. The drains of this house were not cut off from the sewer, and it rejoiced in the delights of a box-trap. In the third (Z. 885·3) the drains were found to be silted up. In 6 others the drainage defects revealed by the tests were only noticed outside the house, in 3 of them at the foot of the soil-pipe, in 2 at the joints of the fall-pipe, in the remaining one (Z. 817 : 9) at a surface gully near

the door of a shop adjoining the house, and connected with the drain of a slaughter-house. In the tenth case the drainage was trapped, cut off, and the smell of a test placed in the outside drain did not enter the house, but in this case (Z. 784·7) there was an offensive well in the cellar.

TESTING OF DRAINS IN TYPHOID FEVER.

Formerly the testing of drains was carried out by the inspectors when they thought fit, or when they were specially so directed. Since a quite recent period an attempt has been made to systematize this work, and, in addition to casual testings, to get a test made of the drains in every case of diphtheria, membranous croup, and typhoid fever heard of. There had been some looseness in carrying out these instructions, and in April, 1895, it was found necessary to establish a special test-book, and the zymotic clerk now gives each inspector a test-form, which he has to return with a statement of the result and method of his examination. There has been, however, some attempt to test the drains in all cases of typhoid since the month of August, 1894. It is proposed here to consider the results thus obtained.

During the period of compulsory notification, the 633 persons whose house conditions were examined lived, as we have seen, in 553 houses. Of these, since August, 1894, the records of the tests made in 390 dwellings are available. Of the 390 houses thus examined, 164 had all their ordinary drains severed from the sewer, and 226 had one or more drains not thus cut off. These numbers exclude all houses in which there was no drain to test. These amounted in the whole twenty months to 1·9 per cent. of the 633 typhoid case-houses dealt with in table 14.

Otherwise, as there was no selection of any kind, the 390 tested may be regarded as a fair sample of the actual typhoid houses, the houses with drains severed forming 42, those with drains not severed 58 per cent. These numbers may be compared with those already given (page 65), when the numbers were 39·3 per cent. "severed," and 58·8 per cent. "not severed," the remaining 1·9 being the houses, as already said, without drain. When

it is remembered that, in the figures given under the heading of “disconnection of drains” (page 65), all houses, in which there was an inside water-closet in which the soil-pipe was not carried, without any diminution, above the eaves of the house, were subtracted from the disconnected and added to the non-disconnected houses, and that all houses without drain were also added to the latter group, it will be seen that the proportions are very nearly the same.

TABLE 14b.

Showing result of tests applied to drains in 390 houses, in which cases of typhoid (= enteric) fever were heard of, in the whole group, and separately in the “disconnected” and “not disconnected.”

	Houses examined.	Per cent. of larger group.	PERCENTAGE.	
			Found wrong.	Not found wrong.
All	390	—	33·1	66·9
“Cut off”	164	42·1	15·9	84·1
“Not cut off” ...	226	57·9	45·6	54·4

General results in severed and unsevered houses.—Of the whole 390 houses (table 14b), irrespective of whether their drains (other than inside closet drains) were severed from the sewer or not, 129 (or 33·1 per cent.) were found, on testing, to be in aërial connection, with the sewer, while 261 (or 66·9 per cent.) were not discovered as being, at the time, in that condition. Of the 164 houses with drains (other than water-closet soil-pipes) severed from the sewer, the drains of 26 (or 15·9 per cent. of the 164) were found, on testing, to be defective, while those of 138 (or 84·1 per cent.) appeared to be intact. On the other hand, amongst the 226 houses not severed from the sewer, the drains of 103 (or 45·6 per cent. of the 226) were found defective, while in 123 (or 54·4 per cent.) such was not found to be the case. The contrast between the two groups—16 per cent. defective in the severed, 46 per cent. in the

unsevered—reminds one of a similar relationship between the “cut-offs” and “not cut-offs” at Highbury, referred to in the annual report for 1894, p. 135, where, in the former, the smell entered the house in 19 per cent., and in the latter in 60 per cent. of the houses tested.

Tests in houses with inside water-closets.—Forty-one (or 10·5 per cent.) of the 390 houses had inside water-closets. Of these, 17 (=4·4 per cent. of the 390) had the soil-pipe fully ventilated in the manner described, 9 (=2·3) had a fall-pipe as a soil-pipe ventilator, 3 (=0·8) had some special but small ventilating pipe, while 12 inside water-closet houses (=3·1) had no arrangement for ventilating the soil-pipe whatever. As already pointed out, the three latter groups we have generally included in the non-disconnected houses, but for the special purpose of this enquiry they have been got out separately.

Amongst the 17 houses in which there was an inside F.V. water-closet, in 4 (or 23·5 per cent. of the 17) the smell of the test penetrated into the house, in 13 (or 76·5 per cent.) it did not. Twelve (or 70·6 per cent.) of the 17 houses had their drainage “otherwise severed,” whilst 5 (or 29·4 per cent.) were not in all other respects cut off from the sewer. Of the 12 houses with F.V. inside water-closets, and all other drains entirely cut off, 2 (or 16·7 per cent. of the 12) showed some defect on testing, while 10 (or 83·3 per cent. of the 12) showed no defect. These proportions are nearly the same as those of all houses severed, which were 16 and 84. On the other hand, of the 5 houses with inside F.V. water-closets, whose drains were not otherwise severed from the sewer, 2 (or 40 per cent.) were found defective, 3 (or 60 per cent.) not. These numbers are also well comparable to the whole group of non-disconnected houses. In both cases it will be noticed that the conditions in the water-closet houses are a little less favourable. The numbers are too small for us to lay any great stress upon them.

These figures refer to houses in which an attempt had at least been made at dealing properly with the soil-pipe. Let us see the

other side. Grouping together houses with inside closets, whose soil-pipe was ventilated (1) by fall-pipe, (2) by separate but small pipe, or (3) not at all, to the number of 24; of these, 11 (45·8 per cent.) showed drain defects on testing, 13 (54·2) did not. Dividing these again into the two groups of severed and not severed,—11 in the one and 13 in the other,—of the former, 4 (=36·4 per cent.) showed defects, 7 (or 63·6 per cent.) did not, and of the latter or non-severed group, 7 (or 53·8 per cent.) showed defect, 6 (or 46·2 per cent.) did not. These latter figures are again too small to carry any weight. It will be noticed, however, that, while the drains of the whole group of 390 houses were found defective, or not found defective, in the proportions of 33 per cent. and 67 per cent., in the group of 24 houses with not F.V. water-closets inside the houses, the proportions were 46 and 54 per cent. While the houses disconnected from the sewer, numbering 164, showed defects in 16 per cent.; the smaller group of not F.V. water-closet houses also disconnected, except as to soil-pipe, from the sewer, showed defects in 36 per cent. While again the 226 non-severed houses had 46 per cent. with patent defects, the 13 of them with not F.V. water-closets inside had 54 per cent. aërially continuous with the sewers. The numbers, as just said, are small, but, so far as they go, are against the inside water-closet houses, and especially against those whose soil-pipes were imperfectly ventilated.

Inside v. outside water-closets.—The whole group of 41 houses (table 14c), with inside water-closets (10·5 per cent. of the whole 390), contained 15 (or 36·6 per cent.) in which the tests revealed a drainage defect, and 26 (or 63·4 per cent.) in which no such defect was found. Of this small group of 41, it will, however, be noticed that 23 (or 56·1 per cent.) were, apart from the water-closet, entirely severed from the drain, while 18 (or 43·9 per cent.) were not. Of the 23 entirely severed, 6 (or 26·1 per cent.) revealed defects, while 17 (or 73·9 per cent.) did not, while of the smaller group, consisting of 18 inside water-closet houses not severed from the sewer, 9 did, and 9 did not, show any defect on testing. That is, of those inside water-closet houses which were (apart from the water-closet) entirely severed from the sewer, a quarter showed defect, of those not otherwise entirely severed, half.

TABLE 14c.

Similar to last in reference to 41 houses with inside water-closets, showing also the results found, on drain testing, where the soil-pipe was fully ventilated and otherwise.

	Houses examined.	Per cent. of smaller group.	PERCENTAGE.	
			Found wrong.	Not found wrong.
All	41	—	36·6	63·4
Drains, other than soil-pipe, “cut off”	23	56·1	26·1	73·9
Do do. “not cut off”	18	43·9	50·0	50·0
Soil-pipe, F.V.	17	—	23·5	76·5
Do. other drains “cut off”	12	70·6	16·7	83·3
Do. do. “not cut off”	5	29·4	40·0	60·0
Soil-pipe, not F.V.	24	—	45·8	54·2
Do. do. other drains “cut off”	11	45·8	36·4	63·6
Do. do. do. “not cut off”	13	54·2	53·8	46·2

Let us compare these with the houses in which the water-closet was outside (tables 14d and 14e). There were 78 such. In 16 (or 20·5 per cent. of the 78) our tests revealed defects. In 62 (or 79·5 per cent.) they did not. The houses that were “completely severed” (49) formed 62·8 per cent. of this group of outside water-closet houses, and of these 49 with drains entirely severed, 8 (16·3 per cent. of the 49) showed defects; 41 (83·7 per cent.) did not. On the other hand, of the smaller group of 29, also outside closet houses, but not severed from the sewer, 8 were again defective; but these 8 formed, of course, a larger proportion (27·6 per cent.), of the 29 than of the 49. The remaining 21 (72·4 per cent.) showed no defect.

To put the matter shortly, 37 per cent. of all houses with inside water-closets were found, on testing, to have drain defects, but only 21 per cent. were so found where the only water-closet was outside the house (table 14d). The proportion was higher in

houses with inside water-closets than in those which had water-closets only outside the house, whether the former had a properly ventilated soil-pipe or not, but while the proportion only rose from 21 per cent. in houses with outside water-closets, to 24 per cent. in houses with F.V. closets inside, it rose to 46 per cent. in those in which the soil-pipe was not fully ventilated. The question of whether other drains were also properly treated, as shown above, had much to do with the proportion found defective.

TABLE 14d.

Showing percentage of all inside water-closet houses found, on testing, to have drain defects; of those with F.V. soil-pipes, and with soil-pipes not F.V.; showing also the proportions in houses with outside water-closets.

	Houses.	Found wrong.	Not found wrong.
Inside W.C. ..	41	36·6	63·4
Outside W.C. ..	78	20·5	79·5
Inside (F.V.) ..	17	23·5	76·5
Inside (not F.V.)	24	45·8	54·2

Tests in houses with other outside conveniences.—Table 14e gives the proportions of houses found defective on drain-testing in which various classes of outside closets were in use. The proportion in 78 outside water-closet houses was, as we have seen, 20·5. In 114 trough-closet houses it was 27·2, and in 157 houses with middens or pails (153 of the former, 4 of the latter) it rose to 42·7 per cent. This was obviously owing to the increasing percentage of houses with undisconnected drains found in the later groups. This proportion rose from 37·2 in the houses with outside water-closets to 62·3 in the latrine houses, and 68·8 in those using middens.

Approximate conclusions.—While in houses of all classes in which drainage was cut off, defects were revealed by tests in

15·9 per cent., the percentage became 16·7 in houses with F.V. water-closets, but 36·4 where the soil-pipe was not F.V. It was 16·3 in cut-off houses with outside water-closets, was the same in the midden houses, and fell to 9·3 in those with trough latrines.

TABLE 14e.

Similar in reference to 78 houses with W.C. only outside, 114 with trough latrines, and 157 using middens or pails.

	Houses examined.	Per cent. of smaller group.	PERCENTAGE.	
			Found wrong.	Not found wrong.
Outside W.C's.	78	—	20·5	79·5
Cut off	49	62·8	16·3	83·7
Not cut off	29	37·2	27·6	72·4
Latrines	114	—	27·2	72·8
Cut off	43	37·7	9·3	90·7
Not cut off	71	62·3	38·0	62·0
Middens, &c.	157	—	42·7	57·3
Cut off	49	31·2	16·3	83·7
Not cut off	108	68·8	54·6	45·4

It might seem, therefore, so far as these figures go, and they refer only to houses examined on account of typhoid, that, in Leeds, if your drains are cut off from the sewers there is least chance of a break down in a cottage with a latrine (9·3), an equal chance with a midden or an outside water-closet (16·3), a very slightly greater chance (16·7), if you have an F.V. water-closet within doors, but a greatly increased risk if the soil-pipe of the inside water-closet is imperfectly ventilated (36·4).

On the other hand, if you neglect disconnection your risk is greatest in the midden using house (54·6), next so in the one with imperfectly ventilated water-closet indoors (53·8), next again in the

house with the F.V. closet (40·0), next with the latrine (38·0), least of all in the house with outside water-closet (27·6).

On the whole, if your drains are “cut off,” it is only 16 chances in a hundred that you are aërially connected with the sewer. If they are not it is 46. This comparison takes, of course, no account of other risks and nuisances, and there are some obvious explanations of some of the curious results, but there is little doubt that an imperfectly constructed water-closet inside the dwelling is a danger to be dreaded.

DIARRHŒA.

Diarrhœa had been less prevalent in 1894 (death-rate 0·45) than in 1893 (1·60), but in 1895 the mortality again rose to 1·58 per thousand, the average death-rate for the previous five years having been 0·99. This rate was caused by 621 deaths at all ages, 578 in children under, and 43 in persons over, the age of five. As usual the mortality was highest in the third quarter. The deaths were 10 under, and 3 over, five years of age, in the first quarter of 1895; 22 and 5 in the second; 465 and 24 in the third; 81 and 11 in the fourth quarter. The deaths fell to 10 under, and 3 over, the age of five in the first quarter of 1896:—that is exactly the same numbers as in the first quarter of 1895.

THIRD QUARTER, 1895.

Table 15 refers only to fatal cases occurring in the third quarter of the year.

In the third quarter of the year our 489 deaths were equivalent to a rate on the estimated population of 4·96 per thousand per annum. The Registrar-General gave us credit during the same period for 486 deaths, which he estimated as equivalent to a rate of 4·94 per thousand.* In comparing our rate with that of other towns, we, of course, take the Registrar-General's figures.

Comparative mortality in third quarter.—In this third quarter of 1895 the thirty-three towns had a rate of 3·4 per thousand from this cause, while the nine large towns, with a population exceeding

* This, when only carried to one decimal place corresponds to a death-rate of 4·9, our own return to one of 5·0.

a quarter of a million, had rates as follows: Edinburgh 1·6, Dublin 2·0, Glasgow 2·2, London 2·4, Birmingham 3·4, Manchester 3·8, Liverpool 4·5, Leeds 4·9, Sheffield 5·8. We therefore compared unfavourably in regard to diarrhoea, even with the two largest Lancashire cities.

The Registrar-General for England and Wales, in his quarterly report, pointed out that the mortality had been higher from diarrhoea in this quarter than in any recent year but one, since 1884. County mortalities had been lowest (0·29 and 0·31) in Hereford and Dorset, highest (3·60, 3·80, 4·08, and 5·78) in the West Riding, Durham, Leicester, and the East Riding.

In the thirty-three towns the rate was so low as 1·07 in Swansea, and 1·13 in Huddersfield, whilst amongst the other great towns it rose to 5·80 in Sunderland, 5·81 in Sheffield, 6·06 in Bolton, 6·45 in Leicester, 7·62 in Preston, and 7·94 in Hull, all these six towns having higher diarrhoea rates than our own. As usual, the death-rate was least in the rural districts.

Time incidence.—In the thirty-three large towns the greatest incidence of mortality was in the fourth week of the quarter (ended July 27th). In this week London, West Ham, Croydon, Leicester (10·2), Liverpool reached their highest death-rate. Leeds had attained its highest (7·5) the week before. There were special circumstances about the cleansing of Leeds, especially the South-east registration district, which tended, in my opinion, to intensify the death-rate in the early part of the quarter. It has been our practice for two or three years back to pay special attention to that district, and especially during the autumn quarter, but owing to a difficulty with some of the men, the Superintendent of the ashpit removal department had, unfortunately, chosen the end of June and the earlier weeks of July, to make a re-arrangement of his work. At my request he at once resumed a more frequent cleansing of the ashpits in this district. In the week ended August the 3rd, Bristol and Birmingham had their highest rates, whilst in the following week, Brighton, Wolverhampton, Norwich, had their *maxima*, Liverpool again attaining its high rate of 6·1. In the week ended August 24th, Derby, Salford, Huddersfield had their

TABLE 15.
Diarrhœa.—Deaths and Death-houses. Thirteen weeks ended September 28th, 1895.

REGISTRATION DISTRICT.	AGES OF CASES.						SEX.		DAYS FROM ATTACK TILL HEARD OF.	AT SCHOOL.	HOUSES.		DENSITY OF POPULATION.		DRAINAGE.										CLOSETS.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
											BACK TO BACK, &c.	THROUGH.	INMATES.	ROOMS.	INSIDE.						OUTSIDE.				W.C.					T.W.C.	M.	PAIL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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0-1	1-5	5-15	15-25	25-60	60+	M.	F.							T.	C.	T.C.	D.	T.	C.	T.C.	D.	D.	C.	T.	D.	F.V.	Not F.V.	INSIDE.	OUTSIDE.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

T.—Trapped and then going directly into drain. C.—Cut off over an outside gully. T.C.—Same, plus an inside trap. D.—Directly connected with sewer.
F.V.—Soil pipe continued full size above the eaves. T.W.C.—Trough water closet. M.—Midden. See note and text.

NOTES TO DIARRHŒA TABLE.

The information in this table (except under the head of density of population) refers to "death houses," the facts about the same house being repeated for every fatal case which occurred in it.

Days from attack till heard of. This column, in regard to 486 patients, gives, for each district, the average length of time from the commencement of the symptoms to the date when information of the death reached our office.

Houses. Column 12 deals with 408 death-houses, of which 382 were back-to-back, 9 "salt pies," and 17 single houses without aperture in the rear wall. Of the latter, 6 occurred in *Wortley*, 5 in *Holbeck*, 2 each in the *South-East* and *Bramley*, and 1 each in *West* and *Hunslet* districts. The "salt pies" occurred, 4 in the *Wortley*, 3 in the *South-East*, and 2 in *Hunslet*. The remaining 78 (making up the 486) were through houses. Of the actual houses, 378 were back-to-back, 9 salt pie, and 16 single houses without a through draught. The remaining 77 (making up the 480) were through houses.

Density of population. The number of inmates or rooms is not recounted where a second case occurred in the same house. The figures given deal with 480 houses in which 486 deaths occurred.

Drainage—disconnection. Houses containing water-closets, with soil-pipe not properly ventilated, are included amongst those "not disconnected." Two hundred and seven death-houses were disconnected, 275 not disconnected, and 4 had no drain. The corresponding actual houses were 205, 271, and 4. The 4 drainless houses were those given in the next paragraph.

Sink wastes. Four single-death-houses had no sink. Of these, 3 were in the *North*, and 1 in the *Bramley* district. There were 43 extra sinks in 43 (all single) death-houses. The worst form of sink in any house is the one counted in the table.

Other inside drainage. Every exit of waste water from the house to the drain, other than the sink, is included in these four columns, but many houses had no other inlet to the drain. These columns, consequently, will not balance the number of houses.

Outside drainage. The last remark also applies to columns 28 and 29. Columns 26 and 27 (fall-pipes), will balance if 16 case-houses in the *North*, 13 in the *West*, 31 in the *South-East*, 19 in *Hunslet*, 8 in *Holbeck*, 11 in *Wortley*, 3 in *Kirkstall*, and 1 in *Chapelstown*, which had no fall-pipe on the house itself, be added. No second fall-pipe to the same house is counted.

Closets. Five (all single-death-houses) had 10 extra conveniences; in the *North* district in column 33 (T.W.C.), one single-case-house had 3 extra T.W.C. closets, and another had two extra T.W.C.'s, in the *West*, column 32 (W.C.), one single-case-house had an additional closet of the same kind, and another (column 30) had 3 extra F.V. closets. In *Bramley* column 31 (not F.V.), a single-case-house had an extra midden.

highest mortalities. In the last week of August: Portsmouth, Bolton, Burnley, Halifax. In the first week of September: Nottingham, Birkenhead, Blackburn, Preston, Bradford, Sheffield, Hull, and Sunderland. In the second week of September: Manchester; in the third: Plymouth, Oldham, Gateshead, and Newcastle; while in the concluding week of the quarter, Brighton had again a rate of 4·4, and Cardiff, Swansea, and again Nottingham, had their *maxima*.

Relation of death-rate to that of previous years.—Comparing ourselves again with the other four large English cities, with more than a quarter of a million of population, it will be noticed that in London the annual diarrhoea death-rate, in the third quarter of 1895, was 2·4, against an average in the corresponding quarters of the preceding decade of 2·0. In Birmingham it was 3·4, against an average of 2·9; in Liverpool it was 4·5, against an average of 3·0; in Manchester 3·8, against 2·6; in Leeds 4·9, against 3·2; in Sheffield 5·8, against 3·3.

It will be noticed the absolute excess on the rate per 1,000 living, was least, ·4 and ·5, in London and Birmingham, and greatest, 1·5, 1·7, and 2·5, in Liverpool, Leeds, and Sheffield. Viewed as a percentage of the average decadal rate, the increase was 17 per cent. in Birmingham; 20 in London; 46 in Manchester; 50 in Liverpool; 53 in Leeds; and 76 in Sheffield.

Age mortality.—From table 15 it will be seen that of the 489 deaths, 388 were those of children under the age of one. These formed 79 per cent. of all the deaths in the quarter, and were equivalent to a mortality at the rate of 139 per thousand children living at that age.* The 77 deaths between one and five formed 15·8 per cent. of the total diarrhoea deaths in the quarter, and were equivalent to a death-rate, per annum, of 8 children per thousand living at that age. From five to fifteen, and fifteen to sixty, the mortality was small. The 13 deaths in persons over 60 formed 2·7 per cent. of the whole in the quarter, and were equivalent to a death-rate, on the estimated population

*See page 19 earlier, on infantile death-rates.

above that age, of 2·44. These numbers will be better understood if placed in the form of a table.

TABLE 15a.
Age mortality from Diarrhœa, third quarter of 1895.

	Deaths.	Per cent. of total.	Rate per 1,000 living at age.
Under 1	388	79·3	138·70
1 to 5	77	15·8	8·08
5 to 15	5	1·0	·23
15 to 25	1	·2	·05
25 to 60	5	1·0	·13
60+	13	2·7	2·44
All ages.	489	100·0	4·96

Of the 388 deaths amongst children under one year of age, 108 occurred in the first three; 130 in the second three; 83 in the third three; and 67 in the fourth three months of life.

Sex Mortality.—Of the 489, 248 were of the male, 241 of the female, sex; that is, for every thousand of the gentler, there were 1,029 of the sterner, sex.

Days from attack till heard of.—In regard to three cases our information is incomplete. Of the remaining 486, the information reached us an average of 17·2 days after attack. In nine cases in Chapeltown district, the average was 11 days; in 94 cases in the North registration district it was 20·1 days.

School attendance.—Six of the 486 were in attendance at school at the time of attack. This is one more than the number of fatal cases between the ages of five and fifteen years.

HOUSE CONDITIONS.

Through houses, etc.—Of the 486 case-houses,* 382 were back-to-backs, 9 were salt-pies, and 17 were single houses without a

* As to the meaning of case-house, see pages 35 and 40.

through draught, in all 408 (or 84·0 per cent.). The remaining 78 (or 16·0 per cent.) were through houses.

Inmates and rooms.—The 486 fatal cases occurred in 480 houses, containing 1,543 rooms, and 2,724 inmates, an average of 3·2 rooms, and 5·7 inmates to a house, and 1·77 inmates to a room.

Drainage.—Four of the 486 case-houses had no drain of any kind, 275 had drains not severed from the sewers, leaving 207 in which all ordinary wastes were disconnected outside the house, and any soil-pipe from an inside water-closet carried the same size above the eaves.

Four houses (or 0·8 per cent.) had no sink. The sink wastes went without any trap into the sewer in 4 others (0·8 per cent.). They were trapped but not cut off in 261 (or 53·7 per cent.), 52 having the additional nuisance of a box-trap. In 217 disconnection of the sink was effected outside the house, that is in 44·7 per cent., in 10 of these without any inside trap.

Closet accommodation.—Of the 486 diarrhœa death-houses in 8 (or 1·6 per cent.), the worst form of closet was an inside water-closet with the soil-pipe carried full-bore above the eaves. In 9 (or 1·9 per cent.) there was an inside water-closet with a soil-pipe imperfectly ventilated, in 98 (or 20·2 per cent.) the water-closet was outside the house, making 115 (or 23·7 per cent.), in which there was the use of the ordinary water-closet. In 199 (or 40·9 per cent.) the closet was of the trough type. In 167 (or 34·4 per cent.) it was a midden, in 5 (or 1·0 per cent.) a pail.

General sanitary conditions. Of the 217 houses in which all ordinary wastes were disconnected from the sewer, 10 (all single-case-houses) contained at least one inside water-closet, the soil-pipe of which was not fully ventilated, 14 (all single-case-houses) had each a midden not more than three yards from the house, 8 case-houses were dirty. The 8 case-houses were only 7 actual houses. The house with the two deaths was also “overcrowded.” There were 10 other and single-case-houses in the latter category, that is, having a larger proportion than three persons to a room, and 18 “crowded,” that is, having at least three persons to a room. Of these 18, however, 4 belonged to those enumerated as dirty, so that

the crowded and overcrowded, excepting those under the head of dirty, numbered 24. The 217, or deducting the 10 with water-closets 207, "disconnected" houses were therefore reduced by deducting these 46 with other nuisances, to 161 houses in which no serious defect was found at the time of examination, that is to say, 33·1 per cent. It must be remembered, however, that the drains of the majority of these houses were not "tested," and if the same proportion had been tested and found wrong, as were found wrong on testing on account of typhoid, the 33 per cent. would be still further reduced.

FEEDING OF INFANTS UNDER ONE.

So large a proportion of the deaths from diarrhoea in the third quarter were those of children under one, that I have placed, in the form of a table, a statement (as to those who died under that age) of the percentages of those fed on breast milk, partly on breast milk, or not on breast milk at all. I have also given, as far as we could ascertain them, the percentage of "bottle babies," distinguishing those who had only the bottle and those who had the bottle supplemented to some slight extent by natural food. The same information is given for the fatal cases occurring at the several three-monthly age periods of the first year of life.

Percentage not fed by mother.—Of the 385* children under one who died of diarrhoea in the thirteen autumn weeks of 1895, 15 per cent., so far as we could ascertain, were fed at the time of illness entirely at the breast, $14\frac{1}{2}$ per cent. partly at the breast, whilst nearly $70\frac{1}{2}$ per cent. were not receiving nourishment from the mother at all. These proportions naturally varied a good deal according to age. Of the 108, who had not completed the first three months of life, 66 per cent. were not at the breast at all. Of the 130 in the next three-monthly period, 69 per cent. were not at the breast at all. Of the 80, who died between six and nine months of age, $77\frac{1}{2}$, and of the 67, who died between nine and twelve months of age, 72 per cent., were not receiving any nourishment from their mothers.

* Three cases in which we have no information further than age, sex, and date of death are omitted.

Percentage of bottle babies.—Of the whole 385, 66 per cent. were fed by the bottle entirely; $9\frac{1}{2}$ per cent. had the bottle and a little breast milk. Together nearly $75\frac{1}{2}$ per cent. (more than three-fourths) were at the bottle. Another $9\frac{1}{2}$ per cent. were receiving food other than breast milk, but without the aid of the feeding bottle. It is a little singular how very slight the variation is between the proportions of the bottle-fed babies at the different three-monthly periods. They were fewer in the first, more numerous in the third of these periods. If we add those partly fed by the bottle and partly at the breast, the percentages increase at the earlier periods more than at the later ones. The third three-monthly period has still the highest percentage of bottle-fed babies, but those in the fourth class drop from 81·2 in the third to 68·6 in the fourth three-monthly period. This is principally accounted for by the fact that other kinds of food are given to the older children not through the bottle.

Comparison with cases in 1893.—This table may be compared with the one given on page 117 in the annual report for 1893. The present one is probably of more value, as it deals with 385 instead of 153 cases. It is also probably more accurate, as the inspectors, when the first inquiry was made, had some difficulty in getting at the exact facts as to food. Some confusion not unnaturally occurred between the dieting carried out before and after the commencement of the illness. Of the 153 cases given in table 15b, 1893 Report, 18 per cent. had mother's milk only, 14 per cent. partly, leaving 68 per cent. not at the breast at all, against 70 in the annexed table. On the other hand, in the 1893 table, 76 per cent. were fed entirely by the bottle, and 12 per cent. partly by the bottle and partly at the breast. These numbers are in the new table 66 and 9 respectively—in both cases less.

Inference.—There can be very little doubt that during the first six months of life, the age at which 238 of the fatal cases of diarrhœa in the third quarter of 1895 occurred, the percentage of nearly 68, who received no mother's milk at all, points strongly to artificial feeding as one of the most important causes of diarrhœa. There are some other circumstances, such as working abroad of

mothers, the illness or previous death of mothers, which have been gone into very thoroughly, not only for these three months, but for the whole of the years 1894 and 1895, and part of 1896, but I have not had time to make a sufficient analysis of the cases to incorporate them in the present report. I may again remind you, however, that this matter was gone into pretty fully in the report for 1893.

TABLE 15b.

Shewing in percentages, as to deaths specially inquired into, the mode of feeding of 385 infants under one, whose deaths were registered as due to diarrhœa, in the thirteen weeks ended September 28th, 1895.

Ages.	Cases enquired into.	Percentages of those dying at different ages fed				
		On mother's milk only.	Partly at breast	Not at breast at all.	By bottle entirely.	Both at breast and bottle.
0-3 months.	108	17·6	16·7	65·7	61·1	13·9
3-6 „	130	13·1	17·7	69·2	64·6	10·8
6-9 „	80	10·0	12·5	77·5	75·0	6·2
9-12 „	67	20·9	7·5	71·6	65·7	2·9
Under one year.	385	15·1	14·5	70·4	66·0	9·4

Other Diseases.

Rheumatism. We have again separated rheumatic fever from acute and sub-acute rheumatism, for the reasons given in previous reports. Chronic rheumatism and diseases recorded simply as “rheumatism” are not included in either line. Together the acute forms of rheumatism are equivalent to a death-rate of 0·6 per 1,000, as against the same rate last year. Carried to a further place of decimals, the rate would be rather higher in 1894 than in 1895.

It is, perhaps, worth mentioning that whereas of the 22 deaths in 1894, in this group, 9 were attributed to rheumatic fever and

13 to acute or sub-acute rheumatism, in the year we are considering, the figures were 1 and 21 respectively. This is, probably, due to the tendency to disuse the old term "rheumatic fever," and had we persevered in the old method of only noting such under this head, the decreasing number of deaths certified as due to rheumatic fever would have appeared to indicate that the disease had been getting gradually extinct, which is, unfortunately, not the case.

As mentioned in previous reports, deaths may go either to heart disease or acute rheumatism, according to the wording of the certificate, and it is unsafe to lay stress on any diminution of rheumatic affections unless accompanied by a decrease in the deaths from heart disease.

Erysipelas. There were 15 deaths from erysipelas in the year;—6, 3, 1, and 5 in the four quarters respectively. The deaths recorded in 1894 were 16, in 1893, 21, and in 1892, 18. Put as deaths per 1,000 of the population, these numbers are equivalent to .04 last year, .04 in 1894, .06 in 1893, .05 in 1892, .04 in 1891, and .08 in 1890. The disease cannot therefore be considered as on the increase.

Pyæmia. This disease caused 13 deaths, or at the rate of .03 per 1,000 living, as against 19 and 22, or at a rate of .05 and .06 per 1,000 respectively in 1894 and 1893. The rates per 1,000 for the three preceding years, counting backwards, had been .01, .04, and .06 respectively.

Puerperal fever. This is one of the notifiable diseases, and it is one about the nomenclature of which there is always a certain amount of difficulty. To this cause 15 deaths were attributed in 1895, against 16 in the preceding specially healthy year, and 17 in 1893. These numbers are equivalent respectively in each of these 3 years to .04 per 1,000 of the population. That is to say, the difference between the number of these deaths in any of these 3 years does not, according to the usual method of counting, affect the death-rate till the third decimal place. If, however, we take these three diseases, erysipelas, pyæmia, and puerperal fever, together, it will be found that, while the death-rate from the three

TABLE 17.

Showing the deaths of persons under and over five, from certain causes in each quarter of 13 weeks, and in the 52 weeks of the year 1895.

1895.				Thirteen Weeks ended Mar. 30th, 1895.		Thirteen Weeks ended June 29th, 1895.		Thirteen Weeks ended Sep. 28th, 1895.		Thirteen Weeks ended Dec. 28th, 1895.		Fifty-two Weeks ended Dec. 28th, 1895.		Total.
				- 5	+ 5	- 5	+ 5	- 5	+ 5	- 5	+ 5	- 5	+ 5	All Ages.
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Measles	...	...	...	75	7	12	...	10	...	32	...	129	7	136
Scarlatina	...	...	...	5	2	5	...	12	6	17	5	39	13	52
Diphtheria	...	...	...	9	5	1	3	7	3	4	7	21	18	39
Croup (membranous & undefined)	...	...	...	12	2	12	3	6	2	8	1	38	8	46
Whooping Cough	...	...	...	19	1	18	...	25	...	47	3	109	4	113
Continued Fever.	Typhus			...	...	...	...	...	...	...	...	...	...	...
	Enteric			...	6	...	6	3	19	2	49	5	80	85
	Other or doubtful			1	...	...	...	...	...	...	...	1	...	1
Diarrhœa and dysentery	...	...	...	10	3	22	5	465	24	81	11	578	43	621
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Rheumatic fever	...	...	...	...	1	...	...	...	...	...	...	...	1	1
Acute and sub-acute rheumatism	...	...	...	...	7	...	3	...	6	...	5	...	21	21
Erysipelas	...	...	...	1	5	1	2	...	1	1	4	3	12	15
Pyæmia	...	...	...	2	6	...	1	...	3	...	1	2	11	13
Puerperal fever	...	...	...	...	...	...	8	...	1	...	6	...	15	15
Ague	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	...	...	...	5	172	6	166	5	130	3	124	19	592	611
Other tuberculous diseases	...	...	...	46	33	53	19	58	29	63	13	220	94	314
Bronchitis, pneumonia, and pleurisy	...	...	...	261	389	175	164	79	84	199	149	714	786	1500
Other diseases of the air passages	...	...	...	16	20	9	11	8	9	9	12	42	52	94
Influenza	...	...	...	15	50	3	32	...	7	...	8	18	97	115
Heart disease	...	...	...	2	180	2	112	...	94	...	114	4	500	504
Other diseases of the circulatory system	...	...	...	1	7	...	11	...	9	...	8	1	35	36
Injuries	...	...	...	28	54	9	57	11	49	18	53	66	213	279
Other causes	...	...	...	417	562	318	473	495	414	357	454	1587	1903	3490
Total under 5	...	...	...	925	...	646	...	1184	...	841	...	3596	...	...
Total over 5	...	...	...	...	1512	...	1076	...	890	...	1027	...	4505	8101
Total, all ages				2,437		1,722		2,074		1,868		8,101		

was $\cdot 11$ per 1,000 in 1895, it had averaged $\cdot 13$ in 1894, $\cdot 16$ in 1893, $\cdot 07$ in 1892, $\cdot 10$ in 1891, and $\cdot 18$ in 1890.

Influenza. To this disease 115 deaths were ascribed in 1895. In the first quarter there were 15 under, and 50 over, the age of five. These numbers fell to 3 under, and 32 over, the age of five in the second quarter; to 7 in the third and 8 in the fourth quarters, both entirely in these who were above five years of age. In the first quarter of the present year there were 2 deaths, both in persons over five. The death-rates for the five quarters are as follows: $0\cdot 66$, $0\cdot 36$, $0\cdot 07$, $0\cdot 08$, in the several quarters of 1895, and in the first quarter of the present year, $0\cdot 02$. It is not improbable that some deaths, which would have come under another category in former years, are now classed as influenza.

Heart disease. The 504 deaths under this heading include 172 classed as "endocarditis," "valvular disease," &c., 5 attributed to pericarditis, and 321 in which some vaguer description of heart disease was given, or in which the disease was of the muscular fibre. These divisions, therefore, are of little value, except so far as they shew a tendency to more accurate diagnosis. In addition to these, 6 deaths were attributed to "angina pectoris," thus making up the 504. These 504 occurred, 2 in children under, and 180 in persons over, five, in the first thirteen weeks of 1895:— 2 under, and 112 over, five in the second quarter, and 94 and 114, in both cases all over five years of age, in the third and fourth quarters of the year. In the first quarter of 1896 this group included 131 deaths, 2 under, and 129 over, five years of age. It may, therefore, be considered that the rate of the mortality per 1,000 per annum was $1\cdot 85$, $1\cdot 16$, $0\cdot 95$, and $1\cdot 16$ in the four quarters of 1895, an average of $1\cdot 28$ for the year, and $1\cdot 31$ in the first quarter of 1896.

The small mortality due to other diseases of the circulatory system caused an annual rate of $0\cdot 09$ in 1895. As already pointed out, this group of cardiac and circulatory affections cannot safely be considered apart from the acute forms of rheumatism, as it is often a matter of accident to which of these groups death is ascribed.

TABLE 18.

Showing death-rate per 1,000 of the estimated population from certain causes and groups of causes, and for the periods of time dealt with in the preceding table.

1895.				I.	II.	III.	IV.	Year.
Smallpox ...	...	...	..	...	...	...	...	...
Measles ...	...	...	...	0·83	0·12	0·10	0·32	0·35
Scarlatina ...	...	...	...	0·07	0·05	0·18	0·22	0·13
Diphtheria ...	...	...	...	0·14	0·04	0·10	0·11	0·10
Croup (membranous & undefined)				0·14	0·15	0·08	0·09	0·12
Whooping-cough ...	...	...	...	0·20	0·18	0·25	0·51	0·29
Continued Fever.	{ Typhus ...			...	...	...	...	..
	{ Enteric ...			0·06	0·06	0·22	0·52	0·22
	{ Other or doubtful ...			0·01	...	...	...	0·00
Diarrhœa and dysentery ...			...	0·13	0·27	4·96	0·93	1·58
Cholera ...	...	...	...	...	..	...	...	...
Rheumatic fever ...	...	...	...	0·01	...	...	...	0·00
Acute and sub-acute rheumatism				0·07	0·03	0·06	0·05	0·05
Erysipelas ...	...	...	...	0·06	0·03	0·01	0·05	0·04
Pyæmia ...	...	...	...	0·08	0·01	0·03	0·01	0·03
Puerperal fever ...	...	...	...	...	0·08	0·01	0·06	0·04
Ague ...	...	...	...	..	...	...	...	...
Phthisis ...	...	...	...	1·80	1·75	1·37	1·29	1·55
Other tuberculous diseases ...			...	0·80	0·73	0·88	0·77	0·80
Bronchitis, pneumonia, and pleurisy ...	...	...	}	6·60	3·44	1·65	3·53	3·81
Other diseases of the air-passages				0·37	0·20	0·17	0·21	0·24
Influenza ...	...	...	...	0·66	0·36	0·07	0·08	0·29
Heart diseases ...	...	...	...	1·85	1·16	0·95	1·16	1·28
Other diseases of the circulatory System ...	...	...	}	0·08	0·11	0·09	0·08	0·09
Injuries, &c. ...	...	...	...	0·83	0·67	0·61	0·72	0·71
Other causes ...	...	..	..	9·93	8·03	9·22	8·23	8·85
All causes ...	...	...	...	24·73	17·47	21·04	18·96	20·55

Injury, &c. To this group of causes 279 deaths were attributed, equivalent to a rate of 0·71 per 1,000 in 1895. The several quarterly rates were 0·83, 0·67, 0·61, 0·72, with an average rate of 0·71 for the year. The rate for the first quarter of 1896 was 0·69. In the year 1894 the rate was 0·63, and in the preceding four years, counting backwards, 0·56, 0·65, 0·68 and 0·64.

Other causes. The miscellaneous group of “other causes,” not dealt with above caused 3,490 deaths. Fuller particulars in regard to these, shewing not only whether the death was in patients under or over the age of five, but also the district of the city to which they belonged, will be found in table C and the notes thereto.

Notification of disease.

During the year, 1,884 cases were notified to us under the compulsory Act. Of these, 2 were reported as cases of chicken-pox, and 2 as English cholera — diseases not specifically notifiable. There were 63 others reported, 4 as small-pox, 22 as scarlet fever, 1 as diphtheria, and 1 as membranous croup, 34 as typhoid (or enteric), and 1 as continued fever, the diagnoses in which was afterwards altered. Along with the 2 cases of chicken-pox and the 2 cases of English cholera, they are therefore classed in the bottom line of the table as “other disease.”

The table appended is slightly different from the one printed last year. It shews, side by side, in columns 4 and 5, the total number of cases notified from each disease, and the total number of deaths registered. Excluding the cases classed, as just said, under “other disease,” there were therefore 1,817 illnesses during 1895. From the same diseases, in the fifty-two weeks, 237 deaths were registered, including 13 which were not notified to us, leaving 224 which occurred amongst the cases that were heard of.

Of the 168 in col. 8, 5 deaths from diphtheria, 3 from membranous croup, 4 from typhoid, 2 from puerperal fever, and 1 from erysipelas (together 15) occurred before notification. The 13 cases in col. 6 were not notified in life, nor any intimation of

Return of the number of cases of infectious disease reported to the Medical Officer of Health during the year 1895, and of deaths from the notifiable diseases.

DISEASE.	CASES NOTIFIED.			DEATHS REGISTERED.			
	Taken to hospital.	Left at home.	Total.	Total.	Not notified	Amongst those in hospital.	Amongst those left at home.
1	2	3	4	5	6	7	8
Small-pox ..	9	..	9	..	..	..	..
Scarlet fever ..	493	381	874	52	1	29	22
Diphtheria ..	..	129	129	39	1	..	38
Membranous Croup..	..	42	42	30	4	..	26
Typhoid fever ..	145	277	422	85	5	27	53
Continued fever ..	..	21	21	1	1	..	..
Puerperal fever..	..	25	25	15	..	..	15
Erysipelas ..	..	295	295	15	1	..	14
Notifiable ..	647	1170	1817	237	13	56	168
Other ..	60	7	67	9	..	9	..

their illness sent us till we found the deaths in the registrar's returns. All the figures in col. 8, but none of those in col. 6, are included in col. 4.

Excluding the cases in which the diagnosis was altered, of the 1,817 notified cases, 647 went to hospital, 1,170 did not. Of the 647 that went to hospital, 56 died, or 8·66 per cent. Amongst the 1,170 not sent to hospital, there were 168 deaths (14·36 per cent). Of these, however, 15 were cases that were notified to us as "already dead." Deducting these, there remain 1,155, with 153

deaths, or 13·24 per cent. Taking only, however, the diseases which we attempt to deal with in hospital, the mortality in scarlet fever of those sent to hospital was 5·9 per cent.;—of those left at home, 5·8. In typhoid fever, 18·6 and 18·0.* In both cases the mortality was a little higher amongst those sent to hospital. This is perhaps to be principally accounted for by the circumstance that such cases were cases sent from the less healthy neighbourhoods, but I cannot but feel that, if we had more accommodation for the patients we do take in, we should get better results.

In the first quarter of 1896 the notified illnesses amounted to 369, including 17 from other diseases, in most of which there had been a subsequent alteration of diagnosis. An analysis of the cases and the districts from which they come will be found in table B, part 6, of the Appendix.

PART III.—HEALTH OF DISTRICTS.

The rate of the mortality of the various districts has to be computed from imaginary populations. The last available census was taken in April, 1891. The death-rates, calculated four and a quarter years from the date of that census, cannot, therefore, be regarded with any amount of confidence. In the town as a whole, the rate of increase of population between the date of the census in 1871, and that in 1881, was about 1·78 per cent. per annum. The rate of increase between 1881 and 1891 averaged 1·75. These rates are so nearly identical that it is probable that the population for the whole city, estimated to the middle of 1895 at the latter rate of increase, is not very far from correct. But it is altogether otherwise when we deal with the sub-divisions, either those of registration districts (townships), or those corresponding to the municipal wards.

Owing to a coincidence of very high death-rates and very high birth-rates in certain divisions, we suspected that a considerable error possibly existed in our provisionally accepted populations

* Leaving out 4 cases dead at time of notification. If these are included the percentage is 19·1.

for those districts. Accordingly, through the kindness of Mr. Derry, the City Accountant, we went through the rate-books for the whole city for the years 1890-91 and 1894-95, distributing the number of houses existing at each of these periods according to intercepts of wards and registration districts. For each of these "intercepts" we got out an estimated population. This we obtained by increasing the census population for four and a quarter years at the mean annual rate at which the number of inhabited houses had increased during the four years. By adding together the populations thus obtained for the "intercepts," we got new populations respectively for wards and districts which might, perhaps, be regarded as fairly accurate. But as the total population for the city, thus obtained, exceeded by 5,033 that estimated by the Registrar-General, the numbers in the several wards and districts had to be reduced to correspond to the estimated total. This was done in the following way. A list of the smaller areas, which I have called "intercepts," was prepared. In a few small districts, where the number of houses stood exactly as at the time of the census, the estimated population was, of course, the same as that of the census. These districts were excluded from the corrections, and the 5,033 deducted from the remaining 27 "intercepts" in proportion to the new populations standing against their names. We are still not quite satisfied with these populations, but consider they are more accurate than any previously given. It will probably be advisable to repeat this examination of the rate-books for the next report but one, and probably correct the populations of "intercepts" only according to their supposed increase. Should the results differ materially, we may have to reconsider the whole subject. The difficulty, of course, lies in the principle of the correction.

(1) MUNICIPAL WARDS.

Populations. Those given in table 19, for the several wards, are the sums of the corrected populations of the "intercepts" comprised within those wards.

Death-rates. The death-rates calculated for the quarterly reports and reprinted in table E, parts 2, 3, 4, and 5, were calculated upon provisional populations obtained from the

geometrical ratio of increase, afterwards corrected proportionately to their amounts, to correspond with the total of the whole of the city. The ward death-rates in table E, part 1, are calculated upon the population re-estimated in the manner described above. The differences are, in some of these wards, considerable. In the Central Ward the provisional population upon which the quarterly death-rates were calculated, was put down as 23,930. In table 19 it will be seen that it is now only estimated as 22,638. Upon the other hand, the North Ward was provisionally estimated at 29,063. It has a re-estimated population of 33,899, a difference of 4,836. The death-rates of this ward for the several quarters in table E, parts 2, 3, 4, and 5, instead of 21·4, 16·3, 20·9, and 20·2, should be, upon the re-estimated population, 18·4, 14·0, 17·9, and 17·3. That is to say, that they are, in every case, 14·27 per cent. higher calculated upon the provisional, than on the re-estimated, population. In West Hunslet, again, the provisional population was 25,780, the revised population, 27,319; a difference of 1,539. The rates on the revised population are, therefore, 5·63 per cent. below those calculated on the provisional population. In Holbeck, again (Holbeck Ward must be distinguished from Holbeck Registration district), the revised population was 6·3 per cent. above the provisional, and the death-rates upon the latter proportionately below those printed in the quarterly reports. These numbers suffice to shew the uncertainty of all calculations of this kind dealing with small districts. The death-rates in the quarterly reports, printed in the Appendix, are of use in comparing the mortality in the same ward at different periods of the year.* The rates given in table E, part 1, are calculated upon the revised population, and are the same as those in the last column of table 19. It is on account of this uncertainty it is thought necessary, upon each occasion, to print the actual figures. I do not, therefore, offer any remarks as to the comparison of the rates in the various wards.

(2) REGISTRATION SUB-DISTRICTS.

Populations. It is important to avoid confusing the wards

* The actual number of deaths is recorded, that when a new census is taken more accurate rates may be calculated.

TABLE 19.

Table showing deaths in the four quarters of 1895, for each Municipal Ward, with the estimated population and the death-rate of the ward for the year.

MUNICIPAL WARDS.	Population estimated to middle of 1895.	First quarter, 1895.	Second quarter, 1895.	Third quarter, 1895.	Fourth quarter, 1895.	Fifty-two Weeks.	Death-rate.
Central.. ..	22,638	143	120	125	100	488	21·6
North	33,899	155	118	151	146	570	16·9
North-East	24,934	183	105	154	147	589	23·7
East	26,264	192	141	162	136	631	24·1
South	16,904	114	76	115	84	389	23·1
East Hunslet ..	27,118	169	105	169	167	610	22·6
West Hunslet ..	27,319	158	100	140	114	512	18·8
Holbeck	23,400	176	122	155	102	555	23·8
Mill Hill	8,815	56	37	36	46	175	19·9
West	24,770	174	119	149	110	552	22·4
North-West ..	30,007	176	118	125	135	554	18·5
Brunswick	23,346	138	101	92	80	411	17·7
New Wortley ..	19,371	104	73	110	113	400	20·7
Armley & Wortley	30,356	179	133	133	140	585	19·3
Bramley	19,833	96	95	76	76	343	17·4
Headingley	36,572	174	110	147	139	570	15·6
Outsiders . ..	..	50	49	35	33	167	
Totals	395,546	2,437	1,722	2,074	1,868	8,101	20·6

with the registration districts. While the provisional population of the North Ward was below the re-estimated one by $14\frac{1}{4}$ per cent. of the latter, the provisional population for the whole North Registration district was actually in excess of the one obtained by the revised method. In fact, the revised population of the whole registration district was below the provisional population by nearly 5 per cent., and the death-rates, calculated upon the latter, are

TABLE 20.

Shewing the number of deaths from certain specific causes, and groups of causes, in the 52 weeks of 1895, in the sub-registration districts in the City of Leeds. All deaths in public Institutions within the City, of persons belonging to the City, have been referred to the sub-district to which they belonged.

	Small-Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	"Fever."	Diarrhoea.	All Seven.	Croup.	Phthisis.	Influenza and Diseases of the Air Passages other than Consumption.	All other Causes.	All Causes.
Leeds, North	...	25	12	3	27	11	118	196	6	137	324	718	1381
,, West	...	42	9	9	13	17	98	188	14	133	381	959	1675
,, South	...	7	10	1	16	4	76	114	2	74	189	457	836
Hunslet	...	29	10	6	19	17	132	213	9	75	260	757	1314
Holbeck	..	8	2	1	19	4	52	86	2	48	122	329	587
Wortley	...	9	6	5	6	24	82	132	11	73	209	629	1054
Kirkstall	...	8	2	11	8	5	32	66	1	30	98	366	561
Bramley	...	1	...	2	3	1	18	25	...	17	56	175	273
Chapeltown	...	7	...	1	2	3	13	26	1	18	55	150	250
Osmond- thorpe }	...	...	...	...	...	...	...	...	...	...	1	2	3
Cty. of Leeds	...	136	51	39	113	86	621	1046	46	605	1695	4542	7934

1 death from scarlatina, 6 from phthisis, 14 from influenza and diseases of the air passages other than consumption, and 146 deaths from other causes occurred in the City of persons not belonging to Leeds.

nearly 5 per cent. lower than they would have been if calculated upon the revised population. A similar difference of over 3 per cent. obtained in the West Registration district. Indeed, the revised populations were less than the provisional in each division of the township of Leeds. They were less also in Hunslet. They were greater in Holbeck by about 4 per cent., slightly greater in Wortley, and about 2 per cent. greater in Kirkstall. They were less in Bramley, and fully 28 per cent. greater in Chapeltown.

In previous years we have taken into account, in estimating the township populations, the natural excess of births over deaths,

TABLE 21.

Shewing the mortality stated in deaths per 1,000 of the population of the sub-districts, as estimated to the middle of 1895.

	Small-Pox.	Measles.	Scarlatina.	Diphtheria.	Whooping Cough.	"Fever."	Diarrhoea.	All Seven.	Croup.	Phthisis.	Influenza and Diseases of the Air Passages other than Consumption.	All Other Causes.	All Causes.
Leeds, North	...	0·41	0·20	0·05	0·44	0·18	1·93	3·21	0·10	2·24	5·30	11·75	22·60
,, West	...	0·50	0·11	0·11	0·15	0·20	1·16	2·23	0·17	1·57	4·51	11·35	19·83
,, S. E.	...	0·21	0·30	0·03	0·48	0·12	2·26	3·39	0·06	2·20	5·62	13·59	24·85
Hunslet	...	0·46	0·16	0·10	0·30	0·27	2·11	3·40	0·14	1·20	4·15	12·08	20·97
Holbeck	...	0·32	0·08	0·04	0·75	0·16	2·06	3·41	0·08	1·90	4·83	13·03	23·25
Wortley	...	0·17	0·11	0·09	0·11	0·45	1·53	2·46	0·21	1·36	3·90	11·75	19·68
Kirkstall	...	0·23	0·06	0·31	0·23	0·14	0·90	1·87	0·03	0·85	2·77	10·35	15·86
Bramley	..	0·06	...	0·13	0·19	0·06	1·14	1·58	...	1·08	3·55	11·09	17·31
Chapeltown	...	0·33	...	0·05	0·09	0·14	0·61	1·22	0·05	0·84	2·57	7·01	11·69
Osmond- thorpe }	...	...	...	...	...	...	...	...	...	...	2·33	4·65	6·98
Cty. of Leeds	...	0·35	0·13	0·10	6·29	0·22	1·58	2·65	0·12	1·54	4·30	11·52	20·13

1 death from scarlatina, 6 from phthisis, 14 from influenza and diseases of the air passages other than consumption, and 146 deaths from other causes occurred in the City of persons not belonging to Leeds.

allowing the whole of such excess to count to each district, but adding something to those districts whose geometric increase exceeded the natural one. The populations used in calculating the rates in table 21 have been obtained in the manner described on page 93.

Death-rates. Tables 20 and 21 correspond with those given in previous reports. The figures in the former, of course, stand good, whatever our estimate of population.

(3) AREAS SPECIALLY INVESTIGATED.

CAMP FIELD.

In the report for last year, a table was given (page 102) showing the deaths which had occurred in certain enumeration areas of South-East and West Leeds. Those in the former district comprised the two enumeration areas, which together included the whole of the Camp Field insanitary district, and the figures for Camp Field alone were given separately. For the purposes of the Local Government Board Enquiry, in connection with this area, which we proposed to deal with under Section 39 of the "Housing of the Working Classes Act, 1890," this table, which gave the deaths for the five years 1890-4, was extended, so far as the deaths in Camp Field were concerned. It is reprinted here in the extended form for future reference.

In this table the deaths are separated according as they occurred in persons under, or over, five years of age. The death-rates upon the estimated population (which practically corresponded with the enumerated population of the district) are given for each of certain diseases or disease groups. Alongside each such death-rate is printed that for the corresponding group for the whole City during the same five years.

At the foot of the table are given the total deaths in Camp Field in those five years at each of the six age-groups dealt with in tables 3 and 4, and the proportions which these deaths bear to the estimated population at this age in Camp Field and in the whole City. In both cases, for want of other information, the population at these various groups has been regarded as bearing

Table showing deaths in Camp Field area during the five years 1890-94, distinguishing deaths of persons over and under five years of age, with rates of mortality per 1,000 of the estimated population for the area and for the City as a whole.

Causes of death.	Deaths.			Death rates per 1,000 per annum in five years.	
	Under five.	Over five.	All ages.	Camp Field.	Whole City.
Small-pox	...	...	...	..	·02
Measles	2	...	2	·47	·57
Scarlet fever	2	...	2	·47	·17
Fever	2	1	3	·71	·22
Influenza	...	1	1	·24	·18
Whooping-cough	6	...	6	1·41	·42
Diphtheria	...	...	...	...	·10
Diarrhœa, &c... ..	10	...	10	2·35	1·00
Cholera	...	...	...	...	·00
Erysipelas	...	...	...	...	·05
Septicæmia	...	...	...	...	·04
Puerperal fever	...	...	...	...	·03
Thrush	1	...	1	·24	·02
Inanition, &c	...	...	...	...	·15
Alcoholism	...	...	...	...	·03
Rheumatism (ac. and sub.)	...	...	...	...	·06
Rickets	...	...	...	...	·12
Cancer... ..	1	2	3	·71	·65
Phthisis	...	10	10	2·35	1·61
Other tuberculous diseases	4	2	6	1·41	·78
Premature birth	1	..	1	·24	·72
Old age	...	1	1	·24	·92
Heart disease	...	9	9	2·12	1·43
Croup	...	...	...	...	·13
Bronch., pneum., and pleu... ..	18	18	36	8·47	4·42
Other lung diseases	...	..	..	...	·31
Dentition	2	...	2	·47	·43
Disease of liver	...	1	1	·24	·27
Stomach and bowels... ..	...	1	1	·24	·55
Labor	...	...	...	..	·15
Nerves, brain, &c.	13	3	16	3·76	2·67
Kidney	...	2	2	·47	·43
Anæmia	...	..	...	...	·04
Debility	3	...	3	·71	·22
Marasmus	5	...	5	1·18	·61
Syphilis	...	...	...	...	·13
Accident	...	1	1	·24	·63
All other causes	3	5	8	1·88	·81
Total deaths	73	57	130	30·57	21·11
Deaths under 1	49	...	...	405·83	205·20
Deaths, 1 to 5	24	...	...	58·34	34·70
Deaths, 5 to 15	...	2	...	2·11	4·06
Deaths, 15 to 25	...	5	...	5·72	4·84
Deaths, 25 to 60	...	34	...	20·39	14·06
Deaths over 60	...	16	...	69·56	83·70

The age death rates are calculated on the assumption that, both in the City and the area, the persons living at different ages had the same ratio to the whole estimated population, as obtained in Leeds at the census of 1891.

the same proportion to the whole of the estimated population, as obtained throughout the City at the time of the census.

The full Order for dealing with this area has not yet been received, although the Local Government Board have practically approved of the principle.

YORK STREET AREA.

The large area, called in previous reports "Insanitary area No. 1," was presented by me as an insanitary area under the "Housing of the Working Classes Act, 1890," on the 26th February, 1895. The Corporation resolved, on the 9th, that it was an insanitary area, and should be so dealt with, and authorised the Sanitary Committee to prepare a scheme and advise as to which part should be proceeded with first. The Sanitary Committee prepared a scheme dealing with that portion which included Sykes' Yard and Place, Harper's Court, all the buildings not mill property to the north of York Street and abutting thereon as far as Duke Street, the property between Dyer Street and Cross Somerset Street, bounded on the west by the stream, both sides of Back High Street as far as the north-west corner of St. Peter's Square, the square itself west of the school and mission chapel, the houses looking into it on the south side and those in the same block with them looking into Duke Street, St. Peter's Place, Stainburn Square and Court, the whole of the property (except the railway, a portion of the church-yard, and St. James's Church) south of York Street and north of Marsh Lane, from York Court on the east to Harper Street on the west. This area covers altogether, excepting the buildings left out, some $14\frac{1}{2}$ acres, and had an enumerated population in 1896 of 3,844. Calculated on this population, the death-rate, during the three years 1893-1895, was 39.16, or 93 per cent. in excess of that of the city as a whole during the same period.

An analysis of the causes of deaths during these three years, in persons under and over the age of five, and in the six groups of different age periods, was laid before the Commissioners. This table contained deaths and rates of mortality from certain diseases and groups of diseases, and at certain age periods. It is reprinted here.

Table showing deaths in York Street area during the three years 1893-95, distinguishing deaths of persons over and under five years of age, with rates of mortality per 1,000 of the estimated population for the area and for the City as a whole.

Causes of death.	Deaths.			Death rates per 1,000 per annum in three years.	
	Under five.	Over five.	All ages.	York St. area.	Whole City.
Small-pox	...	...	...	...	·03
Measles	6	...	6	·52	·66
Scarlet fever	1	...	1	·09	·12
Fever	...	1	1	·09	·22
Influenza	...	5	5	·44	·16
Whooping-cough	9	...	9	·78	·35
Diphtheria	1	...	1	·09	·14
Diarrhœa, &c... ..	22	2	24	2·09	1·21
Cholera	...	...	...	...	·01
Erysipelas	...	...	...	...	·05
Septicæmia	3	1	4	·35	·05
Puerperal fever	...	...	...	..	·04
Thrush	1	...	1	·09	·03
Inanition, &c.	2	...	2	·17	·15
Alcoholism	...	4	4	·35	·04
Rheumatism (ac. and sub.)	...	...	...	...	·06
Rickets	4	...	4	·35	·08
Cancer... ..	...	23	23	2·00	·68
Phthisis	3	76	79	6·87	1·58
Other tuberculous diseases	7	3	10	·87	·68
Premature birth	6	..	6	·52	·74
Old age	...	10	10	·87	·60
Heart disease... ..	...	34	34	2·96	1·38
Croup	...	1	1	·09	·16
Bronch., pneum., and pleu. .	46	61	107	9·31	3·74
Other lung diseases	...	5	5	·44	·29
Dentition	3	...	3	·26	·38
Disease of liver	...	2	2	·17	·25
Stomach and bowels	3	2	5	·44	·60
Labor	...	2	2	·17	·15
Nerves, brain, &c.	13	24	37	3·22	2·42
Kidney	1	5	6	·52	·41
Anæmia	...	3	3	·26	·05
Debility	1	..	1	·09	·18
Marasmus	22	...	22	1·91	·70
Syphilis	10	...	10	·87	·12
Accident	4	1	5	·44	·64
Other causes	7	10	17	1·48	1·14
Total deaths	175	275	450	39·16	20·26
Deaths under 1	119	...	...	364·70	208·33
Deaths, 1 to 5	56	..	...	50·37	34·10
Deaths, 5 to 15	...	6	...	2·35	3·73
Deaths, 15 to 25	...	13	..	5·50	4·72
Deaths, 25 to 60	...	154	...	34·17	12·77
Deaths over 60	...	102	...	164·05	73·93

The age death rates are calculated on the assumption that both in the City and the area, the persons living at different ages had same ratio to whole estimated population, as obtained in Leeds at the census of 1891.

As you are aware, notwithstanding opposition in both Houses of Parliament, the provisional order, enabling the Corporation to deal with this area in the way contemplated, was sanctioned by the Legislature.

(4) OTHER LOCAL FACTORS.

In table 25 will be found a record of certain of the conditions found in 4,916 "case-houses." The greater part of these were examined on account of illness during the year 1895. Of those in which scarlet fever, diphtheria, croup, typhoid and continued fever, erysipelas, and puerperal fever occurred, that is, in those examined on account of any of the notifiable diseases except small-pox, the case-houses are those visited since the commencement of compulsory notification. Of the whole 4,916 in 67·8 per cent. the patient was alive when the examination was made. In the remaining 32·2 per cent. the patient was already dead before we heard of the case.

As regards the whole 4,916 case-houses, the drainage was found to be wrongly constructed or out of order in 2,930 (or 59·6 per cent). No error was detected in 1,986 (or 40·4 per cent.). The "badly drained" houses include all in which the ordinary wastes were not entirely severed from the sewer, and also those in which, if there was an inside water-closet, the soil-pipe was not fully ventilated. They also include all in which an error was detected on testing. Unfortunately, however, the systematic testing was only done in typhoid, diphtheria, and croup, and even in these only systematically during part of the time dealt with.

Fifteen hundred and fifty-one (or 31·6 per cent.) had water-closets in- or outside. These houses do not however include the whole of those furnished with w.c's, for if there was a water-closet with a properly ventilated soil-pipe inside, and also a midden, the house would be entered under the head of "midden." They include, however, all the w.c. houses in which the soil-pipe was not fully ventilated. The principle adopted is, as explained elsewhere, that the house is entered under the worst form of closet, and that a midden

TABLE 25.

Showing case-houses examined on account of certain diseases, and some of the conditions found as to drainage and closet arrangements during 1895, and, in some cases, during part of 1894.

					CASES.		Total Deaths in City.	DRAINAGE.		CLOSETS.			
					Alive.	Dead.		Good.	Bad.	Water Carriage.		Midden or Pail.	None.
										W. C.	T. W. C.		
Small-pox	...	...	...	...	9	..	...	1	8	3	3	3	...
Scarlet fever	...	{(part 1894)...	732	3	31	286	449	263	188	284	...		
		{(1895) ...	827	2	52	377	452	281	221	327	...		
Diphtheria	...	{(part 1894)...	100	8	36	49	59	43	25	40	..		
		{(1895) ..	128	7	38	46	89	66	25	44	...		
Croup	...	{(part 1894)...	36	14	34	22	28	16	18	16	...		
		{(1895) ...	61	13	47	24	50	25	23	26	...		
Typhoid and continued fever	...	{(part 1894)...	221	3	85	81	143	59	57	107	1		
		{(1895) ..	434	7	33	151	290	125	129	187	...		
Erysipelas	...	{(part 1894) ..	192	4	13	87	109	64	48	84	...		
		{(1895) ...	292	1	15	108	185	103	71	118	1		
Puerperal fever	...	{(part 1894)...	26	2	12	9	19	7	4	17	...		
		{(1895) ...	22	4	14	11	15	10	7	9	...		
Measles (death-houses)	...	...	3	133	136	61	75	31	48	56	1		
Measles (recovery-houses)	...	...	193	...	..	77	116	36	61	96	...		
Measles (recoveries in death-houses)	...	...	58	...	...	31	27	18	16	24	...		
Whooping cough	...	...	...	113	113	45	68	34	40	39	...		
Diarrhœa	...	...	...	...	620	621	260	360	153	244	223	...	
Septicæmia	...	...	...	...	11	11	6	5	5	3	3	...	
Broncho-pneumonia	...	...	...	...	231	232	90	141	65	87	78	1	
Pneumonia	...	...	...	...	254	275	97	157	92	74	88	...	
Pleuro-pneumonia	...	...	...	...	5	5	2	3	3	1	1	...	
Pleurisy	...	...	...	...	12	14	7	5	4	4	4	...	
Empyema	...	...	...	...	9	14	3	6	3	1	5	...	
Influenza	...	...	...	...	111	115	48	63	34	27	50	..	
Laryngitis	...	...	...	...	15	16	7	8	8	4	3	...	
Totals	..	...	...	...	3334	1582	1962	1986	2930	1551	1429	1932	4

is considered a worse form of closet than an inside w.c. with a properly ventilated soil-pipe, but better than one in which the soil-pipe is not carried full bore above the eaves. Fourteen hundred and twenty-nine (or 29·1 per cent.) of the case-houses used trough closets; 1,932 (or 39·3 per cent.) middens or pails, while in 4 (or 0·08 per cent.) there was no closet accommodation attached to the house.

DRAINAGE IN RELATION TO DISEASE.

During the four years 1891-1894, the houses were examined in which 10,493* cases of illness were known to have occurred. Thirty-four per cent. of these case-houses were found to be properly drained, that is to say, as to structural drainage, but the majority were not subjected to special tests. Sixty-six per cent. had some serious sanitary defect, or their drainage was constructed improperly as to principle.

In the shorter period we are now considering, amongst the 4,916 case-houses, in 40·4 per cent. no defect was found in the drainage, but in 59·6 per cent. this was not so. Probably our examination is more rather than less stringent than in earlier years. We have certainly pushed the testing to a greater extent than previously. It is therefore some source of satisfaction to find that our percentage of houses with drains found out of order, or constructed on bad principles, has fallen from 66 to 59½ per cent.

Small-pox. The numbers in small-pox were so small that we may disregard the percentages they give rise to. There were only nine case-houses of which one had efficient drainage, the other eight not.

In the year 1890 we had no small-pox, in 1891-2-3-4,† there were 795 small-pox houses investigated, of which 38·0 had good, and 62·0 per cent. bad drainage. That is to say, the well-drained houses were four in the hundred in excess of all the case-houses

* Exclusive of those houses examined in 1894, which are included, as already stated, in table 25 for 1895. † Including the whole of 1894.

examined on account of illness during the earlier period. The large proportion of badly drained houses amongst the small number examined in 1895, may therefore be regarded as accidental, although it reduces the proportion of well-drained houses examined, on account of this disease, up to the present time to 37·7 per cent. of those so examined, still 1·6 per cent. above the average of the cases tabled in the 6 years.

Scarlet fever. In the twenty months (May, 1894, to December, 1895) 1,564 case-houses were examined. The drainage was found to be defective in 57·6 per cent. of these cases (against 59·6 in whole tabled). That is to say, in this percentage it was either structurally incorrect, or, if properly planned, had got out of repair. In 42·4 per cent. no defect was found, against 40·4 in all included in table 25. It must not be concluded that this 42 per cent. of the patients all lived in healthy houses so far as drainage was concerned, for no drain test was made in the great majority of cases. Further information will be found on page 41.

Diphtheria. In the same period 243 diphtheria case-houses were examined, and 124 case-houses in which croup was reported, whether stated to be membranous or not. The drainage was found "bad" in 61·6 per cent. No defect was discovered in 38·4. The corresponding numbers in the whole table were 59·6 and 40·4. In a considerable number, of the diphtheria case-houses at any rate, a drain test was made. This has to be remembered in comparing the 61·6 per cent. badly drained amongst the diphtheria and croup houses with the 57·6 per cent. in scarlet fever and the 59·6 in the whole tabled. Further information is given on page 46.

Continued fever. Of the 665 case-houses examined in the twenty months, 259 had their ordinary drains "cut off," and the soil-pipe of any inside w.c. fully ventilated. But even amongst these "cut offs" in 24 of the case-houses in which typhoid had occurred, it was found, on testing the drains, that the smell of the test came inside the dwelling notwithstanding the so-called disconnection of the drainage. In three others there were manifest defects found on examination, reducing the houses in which no defect of

drainage was discovered to 34·9 per cent. This is without counting six other case-houses in which, on testing, drainage defects were found outside the dwelling. If, however, we reject this more stringent examination in typhoid houses in order to compare them with the general group, the percentage of "cut off" houses is 38·95, which is still below 40·4 of well-drained houses in the whole table, a number which becomes 40·9 if we include only the "cut offs," and neglect defects admitting sewer gases inside houses with drainage said to be "disconnected."

The difference, therefore, between the continued fever case-houses and the whole group in the table is that, regarded simply from point of original structure, they were not quite 2·0 per cent. less favourably situated than the average houses examined and dealt with in that table, but dealt with in the more severe manner the difference becomes 5·5.

This matter of systematic drain-testing in typhoid houses is gone into at p. 69, and it there appears that nearly 16 per cent. of the "cut-off" houses examined, when further tested, were found faulty as to drainage.

Erysipelas and puerperal fever. Taking both diseases together (amounting to 543 case-houses in the twenty months), 39·6 per cent. came into the well-drained class, as against 40·4 of the whole group. Few or none of these houses were examined by testing, the bad drainage is therefore all the more conspicuous. Taking erysipelas alone the percentage of well-drained houses was 39·9, while in puerperal fever alone it was 37·0; but the numbers dealt with in the latter case were small.

Measles. Grouping the three classes of measles houses together, we have 387 case-houses examined (all in 1895), of which 43·7 per cent. come into the well-drained, 56·3 into the badly drained group. The well-drained had the advantage of three in each hundred over the whole tabled. (See pp. 34 & 35.)

Whooping-cough. We only examined, in 1895, 113 death-houses on this account, of which in 39·8 per cent. we found no defect by our ordinary examination of drains. As most of these drains,

like those in the measles houses, were not "tested," we may compare them with 40·9, the percentage not found unsafe in the whole group when the results of special testing are ignored.

Diarrhœa. In 620 death-houses investigated (all in 1895), on account of this disease no drainage defect was found in 41·9 per cent. at the ordinary examination. These houses were therefore a little better in regard to drainage than the average of houses in table 25 examined, quite 1 per cent. if we neglect, in both cases, the more stringent examination by tests.

Pneumonia, broncho-pneumonia, pleurisy, and pleuro-pneumonia. Five hundred and two death-houses were examined, all during 1895, on account of these diseases. In 39·1 per cent. the ordinary examination revealed no drainage defect. This is a little below the average of 40·9 of the whole group.

Influenza. On account of the 115 deaths which occurred we examined 111 death-houses. In 48 or 43·2 per cent. no drainage defect was found. The drains in most of the 111 were not tested; we therefore compare the 43·2 with 40·9 for the whole group.

General results. Leaving out of account the small number of cases of septicæmia and laryngitis, which might perhaps have been added to the erysipelas and diphtheria groups respectively, and also the nine cases each of small-pox and empyema, we deal in nine groups with 4,872 case-houses. The whole 4,916 case-houses tabled contained 40·4 per cent. in which no drainage defect was found, or 40·9 in which the drains might be regarded as "cut off," or as having no defect so obvious as to be discoverable without resort to tests; the reduction from 40·9 to 40·4 being due chiefly to the more special testing of the drains where diphtheria or typhoid occurred.

The highest proportion "disconnected" was found in the group of measles houses. It was 43·7 per cent., or 2·8 above the average of the whole table (disregarding the stricter tests). Next

came the somewhat smaller group of influenza death-houses, 43·2, or 2·3 above the 40·9 per cent. The scarlet fever group came next, 42·4, or 1·5 above that rate. Diarrhoea death-house had 41·9 per cent. of houses in which the less strict examination detected no drainage error. That is 1·0 above the 40·9 average.

On the other hand, in the small group of whooping-cough death-houses, 39·8 per cent. revealed nothing wrong to the ordinary examination—that is, 1·1 below the 40·9 average. The group of erysipelas and puerperal fever (39·6) were 1·3 below the same average, and the pneumonia group (39·1) 1·8 below. In the diphtheria and croup houses the percentage of well-drained houses was 2·0 below the 40·4, which was the average for the whole table when the houses thrown out by the more severe test were excluded. Finally and worst came the fever dwellings, in which the well-drained houses numbered only 34·9 per cent., or 5·5 below the 40·4 of the whole group.

In the 387 case-houses, which were examined because measles was known to be present, 43·7 per cent. had their drains “cut off,” or had no very obvious drainage defect. In the 665, examined on account of “fever” only, 34·9 passed our test; a difference of 8·8 between the groups.

CLOSET ARRANGEMENTS.

The 4,916 case-houses dealt with in 1895 and partly in 1894,* in the way already described, consisted of 1,551 in which there was an ordinary water closet either inside or outside the house;—of 1,429 in which a trough closet was the accommodation provided;—of 1,932 in which the occupants used a midden or pail, and of 4 in which there was no special convenience provided. That is to say, these groups respectively formed 31·6, 29·1, 39·3 and 0·1 per cent. of the case-houses examined.

The 10,493 case-houses visited during 1891-4, selected in the same manner, and including those described at page 104, had cor-

* The notifiable diseases (except small-pox) dealt with in table 25, include cases notified from May to end of 1894, and all notified in sanitary year 1895.

responding percentages of 29·9, 28·6, 41·4, and 0·1. That is to say, the houses with ordinary water-closets inside or outside the dwelling were rather in excess in the later, as compared with the earlier, period, and those using trough water-closets also a little more common. On the other hand, the houses with middens were less common in the later, than the earlier, period. These figures, of course, refer only in each case to the examinations tabled in those groups of years when taken in their entirety. They represent general results. In dealing with this year's table, the number of case-houses under each following disease group is the same as was dealt with in speaking of drainage.

Small-pox. The houses examined, as already said, were too few for us to attach any importance to the percentages they yielded:—3 had ordinary closets either inside or out, 3 had trough water-closets, and 3 had middens or pails

Scarlet fever. The water-closet houses were 34·8 per cent., as against 31·6 in the whole table; the trough water-closets 26·2 against 29·1 tabled, and the midden or pail closet houses 39·1 against 39·3. The scarlet fever cases, therefore, to a larger extent, occurred in water-closet houses, and to a less extent in trough water-closet houses than was the case in the whole group investigated. See also p. 42.

Diphtheria and croup. This group of 367 had the following percentages: water-closet houses, 40·9; trough water-closet houses, 24·8; midden or pail houses, 34·3; the first considerably in excess of the average of the table; the second, though to a less extent, still considerably below the average; the third also considerably below the average of the year. See also p. 46.

Continued fever. The group consisting of 665 continued fever houses, had 27·7 per cent. water-closet houses (as against 31·6 in the whole table); 28·0 trough water-closet houses (as against 29·1 of the whole table); 44·2 middens or pails, and 0·2 without convenience of this kind; there were, therefore, in proportion, nearly 4 per cent. less water-closet houses of the ordinary

kind, more than 1 per cent. fewer with trough water-closets, and nearly 5 per cent. more with middens or pails than the average of the whole table. See also p. 67.

Erysipelas and puerperal fever. The 543 cases of erysipelas and puerperal fever lived in houses of which 33·9 per cent. had ordinary water-closets, 23·9 troughs, and 42·0 middens or pails, while 0·2 had no convenience provided. The water-closet houses were in excess of the average, those with trough closets considerably below the average, and those with middens above the average of the table.

Measles. Of the 387 measles houses examined 22·0 per cent. were water-closet houses, 32·3 latrine houses, 45·5 midden houses, and 0·3 lacking in the necessary accommodation. Middens were again considerably in excess of the average, trough water-closets also in excess, and ordinary water-closets nearly 10 per cent. below the average. See also p. 35.

Whooping cough. In the 113 cases of whooping cough the percentages were 30·1, 35·4, 34·5, and 0. Trough closets in excess, midden closets less.

Diarrhœa. Of the 620 case-houses 24·7 per cent. had water-closets attached, 39·4 (10 per cent. in excess), trough water-closets, 36·0 middens or pails. Water-closets very much below the average, trough closets considerably in excess, and middens markedly below. See also p. 82.

Pneumonia, broncho-pneumonia, pleurisy, and pleuro-pneumonia. The water-closet houses were 32·7 per cent., trough closet houses 33·1, midden or pail 34·1, and those without convenience nearly 0·2 per cent. See p. 29.

Influenza. In the 111 cases of influenza the percentages were 30·6, 24·3, 45·0, and 0.

General results. Of the several groups dealt with above excluding, as in dealing with drainage the small group there

named, the following results come out as to water-closets. The whole 4,916 had a percentage of 31·6 using w.c's. of the ordinary kind, either within or outside the house. This percentage of w.c. houses was exceeded by 9·3 in the diphtheria and croup group (367 case-houses); by 3·2 in the scarlet fever group (1,564 case-houses); by 2·3 in the (543) erysipelas and puerperal fever group, and by 1·1 in the pneumonia (502) group.

On the other hand, the small group of influenza houses (111) came 1·0 below the average; the small (113) whooping cough group 1·5 below. The more important (665) "fever" group was 3·9 below; the diarrhoea (620) death group 6·9; and the measles (387 cases) group 9·6 below the average.

The trough closet, which has largely replaced the midden in the more crowded districts, supplied the closets to 29·1 per cent. of the tabulated cases. The diarrhoea death-houses (620) had 10·3 more, the whooping cough and pneumonia death-houses, 6·3 and 4·0, and the measles case-houses 3·2 more than the average.

On the other hand, the large group of continued fevers were 1·1 below the average, the still larger group of scarlet fever cases 2·9 below, while the diphtheritic group, the small influenza group, and the group comprising erysipelas and puerperal fever, were respectively 4·3, 4·8, and 5·2 below the average.

Middens prevailed in 39·3 per cent. This rate was exceeded by 6·2 in measles, 5·7 in influenza, 4·9 in fever, and 2·7 in erysipelas with puerperal fever. On the other hand, scarlet fever was 0·2 below, diarrhoea 3·3, whooping cough 4·8 below, while the diphtheritic and pneumonic groups were 5·0 and 5·2 below the average.

It would be easy to exaggerate the importance of some of these local factors; at the same time, in dealing as we do here with the houses examined in the 665 cases of fever, it is perhaps worth noting that the percentage, amongst these houses, well-drained was 5·5 below the average of the 4,916 dealt with in the table, and that the percentage of these houses, which had the use of water-closets, was 3·9 below the percentage of those generally tabled.

The percentage which had the use of trough closets was 1·1 below the average of the whole tabled, while the percentage which had the old-fashioned middens, was 4·9 in excess of the average.

On the other hand, scarlet fever, of which 1,564 case-houses were investigated, showed a percentage of well-drained houses 1·5 above the average of all tabled. It showed a percentage of water-closet houses 3·2 above the average, while the houses in which trough closets and middens prevailed, were respectively 2·9 and 0·2 below the average of the table.

PART IV.—DEPARTMENTAL WORK.

CHANGES IN STAFF.

In April, Inspector W. M. Coates (North Ward) resigned his appointment to go into business with his father, and in June Mr. J. C. Cromack, previously model maker at the Leeds Forge, was appointed in his place. In May, Divisional Inspector J. C. Smith obtained an appointment as Inspector to the West Riding Rivers Board. Inspector G. Newhouse was appointed Divisional Inspector in his stead. Mr. S. Howe, foreman in trough closet department, was in July made Ward Inspector to Brunswick Ward, Carter going to Headingley, vice Newhouse.

WORK OF WARD INSPECTORS.

Tables I. and II. shew this work as in previous reports. It will be noted that the number of houses completely inspected fell short by 168 of the number so dealt with in 1894. The number of houses partially inspected, however, was 243 in excess, and the total number inspected, wholly or partly, but so far as they were so inspected, systematically, 75. Amongst the total houses thus systematically inspected, amounting to 15,852 in 1895, in 39·3 per cent. some sanitary defect was found (line 8, table I.), as against 45·3 per cent. of the 15,777 similarly examined the preceding year. While therefore the number inspected was slightly in excess, the proportion of houses found out of order was considerably less. Again, if instead of the houses with some defect found in them, we take the number of sanitary defects discovered in these houses,

it will be found that the latter were 40·2 to every hundred houses examined in 1895 (line 9), and 51 to the hundred examined in 1894.

The total house nuisances found in 1895 were fewer than in 1894 by 1,884, while the houses in which these were found were also 1,026 fewer. There were, however, other nuisances dealt with outside the house increasing the number of nuisances discovered in 1895 to 18,615, which was 1,601 less than the previous year. The nuisances abated were 15,511,804 fewer than in 1894.

On the other hand, the testing of drains was carried out in the later more frequently than in the earlier year. Drains were tested in 2,378 cases, an increase of 340 upon 1894, and the defects found after such tests were 1,801, 148 in excess of those so found the previous year. It will be noted, however, that in 1894 81·1 per cent. of the drains tested proved defective, in 1895 75·7 per cent.

Both, therefore, as to houses examined in the ordinary way, and drains tested by chemical means, the defects bear a smaller proportion to the houses examined than in 1894.

Testing drains.—In an earlier part of this report (page 69), reference is specially made to the testing of drains in cases of typhoid fever, and, though it savours somewhat of repetition, I venture to ask your careful attention to this somewhat important subject. It is not unnatural to suppose that when the drains of a house are all “cut off” from the sewer, anything that might go wrong with such drains afterwards, would be unlikely greatly to affect the interior of the house; but investigations made *en masse* at Highbury, and reported in detail in the annual report for 1894 shewed (1) that in 53 houses, in which the drains were not thus “cut off,” the smell from the tests put into the sewer was detected inside the house in 32 cases (or 60 per cent.), and that (2) even in 97, in which the ordinary wastes were severed from the sewer, the smell of the drain test entered the house in 18 cases (or 19 per cent.). In the same report it was also shewn (3) that in 41 of these 97 “cut off” houses in which the water closets were either in the yard, or under the steps, but in both cases out-

side the four walls of the house, the test smell only came inside the house in two (or under 5 per cent.). The test smell entered the house (4) in 16 other of the disconnected houses, but these 16 all belonged to the remaining 56 "cut offs," in which, while the ordinary house wastes were properly disconnected, the W.C. was situated within the four walls of the dwelling. Twenty-nine per cent. therefore of houses, with other drains all "cut off" but having inside water closets, were in direct aërial connection with the town sewers.

In the same report reference was made (5) to 10 contiguous houses examined in Granby Grove. In these every waste was cut off, and the water closets were outside the house, but in 7 out of the 10 the smell of the test placed in the sewer entered the dwelling.

In the present report, at page 70, table 14b, it will be seen (6) that in 226 houses in which the drains were tested, not on account of an alleged nuisance, but simply because typhoid fever had been present, and in which the wastes were not all "cut off," the test smell entered the house in nearly 46 per cent., while (7) in 164 classed as "cut off" the smell came into the dwelling in nearly 16 per cent. What I want specially to draw attention to, is that in nearly 16 per cent. of the houses classed as "cut off" there was still an aërial connection with the sewer.

The presence of an inside water closet here, also as in Highbury, was a powerful factor in making the house unhealthy. Taking (8) the 41 houses amongst those tested on account of typhoid, and which had inside water closets, nearly 37 per cent. were found in aërial connection with the sewer. As will be seen from table 14c, page 73, the proportion varied (9) from 54 per cent. where the soil pipe was not efficiently ventilated, and the other drains not "cut off," down to just under 17 per cent. where (10) the soil pipe was carried full diameter above the eaves, and all the other drains in the houses disconnected from the sewer.

This matter is gone into in an earlier part of the report, and is only mentioned here in passing, in order again to emphasize the importance of a systematic, periodical, and repeated testing of house drains.

TABLE I.

		Quarters.				City Total 1895.
		I.	II.	III.	IV.	
HOUSE INSPECTION.						
1. } Houses and premises { Infective disease ...	719	535	1068	1062	3384	
2. } completely exam- { Alleged nuisances ...	189	75	112	170	546	
3. } ined on account of { House-to-house work ...	2628	1584	1134	1496	6842	
4. } Houses and premises { Occupants ...	177	144	190	104	615	
5. } examined { Buildings and Offices ...	584	363	259	281	1487	
6. } only as to { Drainage ...	798	755	679	746	2978	
7. Number of houses wholly or partly examined ...	5095	3456	3442	3859	15852	
8. Total number of above houses where sanitary defects were found ...	2004	1336	1384	1507	6231	
9. Sanitary defects found in above houses ...	2026	1388	1386	1578	6378	
NUISANCES, &c.						
10. } Houses dirty ...	191	221	211	171	794	
11. } overcrowded ...	65	62	82	64	273	
12. } damp or dilapidated ...	400	171	165	161	897	
13. } with defective eave-gutters or fall pipes ...	202	94	213	259	768	
14. } Nuisances found in ...	936	671	611	911	3129	
15. } badly drained ...	28	35	32	70	165	
16. } without sink drain ...	5	6	...	...	11	
17. } badly lighted ...	...	...	...	2	2	
18. } badly ventilated ...	1020	1031	1049	1188	4288	
19. } with defective or insufficient closet accommodation ...	646	450	373	328	1797	
20. } with dirty closets ...	255	253	272	286	1066	
21. } with drains, &c., temporarily stopped ...	506	551	581	673	2311	
22. } with other nuisances ...	4254	3545	3589	4113	15501	
23. Total nuisances found in houses ...	4221	3635	3448	4146	15450	
24. No. of houses in which above nuisances were found ...	432	629	496	330	1887	
25. Street gullies stopped ...	54	54	69	79	256	
26. Offensive accumulations ...	191	187	297	296	971	
27. Other outside nuisances ...	4931	4415	4451	4818	18615	
28. Total nuisances found ...	7	15	13	8	43	
29. Complaints unfounded ...	1039	392	815	1422	3668	
OTHER WORK DONE.						
29. } Additional visits paid to houses for	1496	2007	1529	1615	6647	
30. } Infective disease ...	188	78	152	91	509	
31. } Nuisances found ...	2557	2713	2314	2654	10238	
32. } Completion of Reports ...						
32. } Other causes...						
OTHER WORK DONE (continued).						
33. Special examinations of drains by tests...	662	479	509	728	2378	
34. Defects found by ditto ...	459	393	340	609	1801	
37. Appointments ...	231	236	224	253	944	
38. Notices and letters served ...	39	45	18	57	159	
39. Dwelling houses unfit for human habitation closed ...	2	5	2	1	10	
40. Dwelling houses rendered fit for human habitation ...	7	6	1	8	22	
41. Houses cleansed ...	120	199	172	191	682	
42. Overcrowded houses dealt with ...	62	64	49	65	240	
43. Defective spouting, &c., repaired...	278	242	233	314	1067	
44. New midden privies built ...	2	22	4	12	40	
45. Old midden privies repaired ...	21	24	37	33	115	
46. Do. rebuilt ...	...	3	3	7	13	
47. Privies converted into trough water closets ...	20	25	22	37	104	
48. Do. do. ordinary water closets...	15	51	37	86	189	
49. Water closets erected ...	15	22	4	20	61	
50. New dry ashpits or tubs ...	27	46	38	66	177	
51. New trough water closets built ...	18	16	35	13	82	
52. Pail closets converted into water closets ...	15	20	17	18	70	
53. Do. altered into privies ...	7	1	...	4	12	
54. Closets cleansed (lime-washed, &c.) ...	349	389	276	295	1309	
55. Drains in course of construction inspected ...	193	315	366	297	1171	
56. " of reconstruction " ...	347	579	487	735	2148	
57. " inspected when connection made to sewer ...	69	161	122	135	487	
58. Disconnections of house drains effected...	450	746	649	774	2619	
59. Cesspools filled up ...	1	6	10	17	34	
60. Public or private wells abolished...	2	...	2	6	11	
61. Houses supplied with town's water ...	6	14	2	29	51	
62. Trough and water closets repaired ...	369	562	533	351	1815	
63. Other house nuisances remedied ...	677	609	663	854	2803	
64. Total houses for which above work done ...	2770	3580	2762	3587	12699	
65. Houses in which all defects found have been remedied ...	1324	1685	1201	1671	5881	
66. Street gullies cleansed ...	251	566	351	373	1541	
67. Offensive accumulations removed ...	45	60	72	75	252	
68. Pollutions of river or streams remedied...	5	35	4	1	45	
69. Other non-domestic nuisances removed ...	106	124	94	161	485	
70. Additional visits paid to inspect work in progress ...	2118	3295	2618	3477	11508	
71. Total nuisances abated ...	3203	4555	3565	4188	15511	

ANALYSIS OF WORK DONE BY DISTRICT INSPECTORS IN THE SEVERAL WARDS.

TABLE II.

[illegible]

TABLE II.—Continued.

[illegible]

TABLE III.

Shewing the number of drains or sources of pollution diverted from the River Aire and its tributaries, and connected to the town sewers.

Date.	Mill, factory, house drains, stables, and pigstyes.	Water closets.	Privies.	Trade pollutions.	Total.
Previous to Dec. 29th, 1894	5,087	212	219	24	5,542
During the 52 weeks ended Dec. 29th, 1895	31	11	13	..	55
Totals	5,118	223	232	24	5,597

TABLE IV.

Shewing the sanitary condition of workshops on register, and occupied during the 52 weeks ended 28th December, 1895.

DATE. 1895.	No. of visits made to workshops.	EMPLOYEES.			VENTILATION.		CONDITION OF PREMISES.				No. of occupiers noticed for dirty premises.
		Male.	Female.	Total.	Good.	Bad.	Rooms.		Closets.		
							Clean.	Dirty.	Clean.	Dirty.	
5 weeks ended Feb. 2	17	309	114	423	13	4	14	3	15	2	...
4 weeks ended Mch. 2	35	510	246	756	31	4	28	7	27	8	7
4 weeks ended ,, 30	27	151	200	351	26	1	15	12	11	16	12
4 weeks ended April 27	18	121	105	226	16	2	13	5	10	8	5
5 weeks ended June 1	39	365	312	677	39	...	29	10	21	18	10
4 weeks ended ,, 29	30	262	224	486	30	...	26	4	22	8	4
5 weeks ended Aug. 3	37	324	260	584	37	...	20	17	18	19	17
4 weeks ended ,, 31	37	247	260	507	37	...	25	12	19	18	12
4 weeks ended Sep. 28	17	203	160	363	17	...	12	5	11	6	5
5 weeks ended Nov. 2	108	1,228	1,018	2,246	100	8	55	53	51	57	53
4 weeks ended ,, 30	72	678	659	1,337	64	8	47	25	44	28	25
4 weeks ended Dec. 28	29	106	122	228	27	2	19	10	16	13	10
Total 	463	4,504	3,680	8,184	437	29	303	163	265	201	160

TABLE V.

Shewing the number of workshops not previously visited, to which visits have been paid, and the sanitary arrangements at time of visit.

DATE. 1895.	No. of different workshops visited.	DESCRIPTION OF DRAINAGE.				SITUATION OF CLOSETS.			
		Cut off.	Not cut off.	Without.	Out of order.	Inside.		Outside.	
						W.C. soil pipe carried up.	W.C. soil pipe not F. V.	W.C's.	Privies.
5 weeks ended Feb. 2	20	6	7	7	...	3	...	16	1
4 weeks ended Mch. 2	26	9	8	9	...	8	4	8	6
4 weeks ended ,, 30	9	1	4	4	..	3	2	4	...
4 weeks ended April 27	22	8	8	6	...	4	1	15	2
5 weeks ended June 1	15	6	6	3	...	7	1	6	1
4 weeks ended ,, 29	17	3	11	3	...	3	...	13	1
5 weeks ended Aug. 3	13	7	6	...	...	4	4	4	1
4 weeks ended ,, 31	15	4	5	6	...	1	12	2	...
4 weeks ended Sept. 28	3	1	...	2	...	1	...	1	1
5 weeks ended Nov. 2	13	4	2	7	...	3	...	7	3
4 weeks ended ,, 30	15	6	5	4	..	5	...	9	1
4 weeks ended Dec. 28	9	4	2	3	...	6	...	3	...
Total	177	59	64	54	...	48	24	88	17

OTHER WORK OF WORKSHOPS INSPECTOR.

In addition to the work shown in tables IV. and V., 277 additional visits were paid to workshops, and 156 to factories. On account of infectious disease, 30 further visits were made to workshops, and 65 to factories, and for wage enquiry 21 and 3 respectively. Additional visits to 150 and 146 were made for drain and closet inspection, 40 and 55 for drain testing. The Workshops Inspector made 35 visits to bakehouses, and 7 visits to business places in regard to Rivers' pollution. He also assisted Ward Inspectors to test house drains on 67 occasions. Nuisances were abated in workshops of the number of 105, and 50 in factories.

Inspections.

BAKEHOUSES.

In addition to the 35 visits paid by the Workshops Inspector to 30 bakehouses, the following have been made by the Ward Inspectors: Central Ward, 12 visits to 5 bakehouses; North Ward, 22 to 8; North-East, 63 to 12; East, 52 to 13; South, 68 to 4; East Hunslet, 54 to 4; West Hunslet, 21 to 8; Holbeck, 6 to 6; Mill Hill, 48 to 19; West, 26 to 18; North-West, 5 to 4; Brunswick, 39 to 24; New Wortley, 31 to 6; Armley and Wortley, 23 to 4; Bramley, 51 to 12; Headingley, 7 to 7; Total by Ward Inspectors, 528 to 154, or, including those by Workshops Inspectors, 563 to 184.

HOUSE REFUSE.

TABLE VI.

Ashpits inspected during the fifty-two weeks ended
28th December, 1895.

Number of inspections of ashpits.	Requisitions to cleanse sent to Refuse Removal Department from Sanitary Office.	Number of latter returned as carried out.	Ashpits not cleansed within four days of requisition.	Condition of ashpits generally.
90,578	7,973	7,950	165	Good.

TABLE VII.

No. of middens emptied.	No. of dry ashpits or tubs emptied.	No. of boxes or pails emptied.	Total.	LOADS REMOVED.			Total.
				Night soil.	Dry ashes.	Rubbish.	
84,863	312,773	116,200	513,836	34,037	65,479	18,984	118,500

DESTRUCTORS.

At Armley Road, during the fifty-two weeks, 25,989 loads of rubbish, weighing 26,919·5 tons (= 1·04 per load), were destroyed in 16 cells on 296 working days, being an average of 5·86 tons per

cell day. There were 6,423 observations of temperature taken, averaging $1,477^{\circ}$ Fahr.; the highest was $1,500^{\circ}$, the lowest 300° . The pyrometer, however, shews no temperature above $1,500^{\circ}$.

At Beckett Street, 14,035 loads of rubbish, weighing 14,658 tons ($=1.04$ tons per load), were destroyed. There were six cells at work for 49 days, 12 cells for 101 days, and 14 cells for 146 days. The rubbish burned was therefore 4.13 tons per cell-day. There were 6,490 observations of temperature taken, averaging $1,115^{\circ}$ Fahr.; the highest was $1,500^{\circ}$, the lowest 200° . Pyrometer as at Armley Road.

At Kidacre Street, 18,956 loads of rubbish, weighing 19,031.15 ($=1.00$ tons per load), were destroyed in 12 cells during 296 working days, being an average of 5.36 tons per cell-day. There were 6,641 observations of temperature taken, averaging $1,434^{\circ}$ Fahr.; the highest was $1,500^{\circ}$, the lowest 200° . Pyrometer shows no heat above $1,500^{\circ}$.

The consumption per cell-day thus varied from 4.13 at Beckett Street to 5.68 at Armley Road. The average consumption per cell-day for the three destructors was 5.12 . It has to be remembered that this is the average summer and winter, and not the maximum. The cost per ton consumed for the three years ended March 25th, 1896, was got out, and published in a paper read before the Sanitary Inspectors' Association (*Sanitary Inspectors' Journal*, September 1st, p. 135). In this estimate, the actual cost in wages during these three years in leading clinkers in firemen's, managers' (but not weighmen's), wages, cost of lime, rates, gas, water, and all additional expenses, with 4 per cent. on the capital cost of the buildings and land, were added together, and the cost of mortar sold deducted. The whole sum thus obtained divided by the number of tons burnt came to 2s. $0\frac{1}{2}$ d., and varied at the several destructors from 28.54 pence at Beckett Street to 23.13 pence at Kidacre Street. The cost at Armley Road was 23.56 pence. The Beckett Street destructor as will be seen from the figures given above was not worked as fully as the other two.

STREET CLEANSING.

Mr. Hanford reports work corresponding to the cleansing of 164,726 streets, an average of 533 per day for 309 working days. The cleansing of gullies was equivalent to cleansing 162,110, or 525 per day for 309 working days.

The number of horse days for scavenging was 14,209, and for watering 4,208, being an average of horses per day of 46 and 38 respectively.

In addition to the above, 2,792 loads of horse droppings were collected at a cost of £288. This is included in the ordinary net cost of the sub-department, exclusive of removal of snow, viz.:—£13,800. In addition to this amount, £1,561 was paid for removing snow—£303 of it for horse hire, and £1,258 for wages.

FOOD INSPECTION.

TABLE VIII.

Shewing cowsheds and milkshops on the register.

Cowsheds on the register	..	..	..	261
Milkshops	„	..	..	649
Visits to both	..	..	..	976
Applications for registration (cowsheds)			..	3
„	„	(milkshops)	..	27
Cow-keepers registered	..	..	..	2
Milk dealers	„	..	..	18
Cowsheds erected	..	..	..	4
„	reconstructed or enlarged	..	..	6
„	properly drained	..	..	3

TABLE IX.

Samples of food sent to the City Analyst for examination during the 52 weeks ending December 28th, 1895.

Article.	Genuine.	Poor in Quality.	Adulterated.	Total.	Summoned.	Convicted.	Dismissed.
Milk	126	59	8	193	7	7	...
Butter	5	...	1	6	...	...	...
Lard	1	...	...	1	...	...	...
Cheese... ..	2	...	2	4	1	1	...
Margarine ...	2	...	..	2	...	...	...
Tinned Peas ...	...	...	4	4	...	...	..
Ground Ginger	11	...	4	15	...	...	...
Tincture of Rhubarb	1	3	...	4	...	...	...
Whisky	2	...	...	2	...	...	...
Castor Oil Pills	1	...	...	1	...	...	...
Oatmeal	1	...	...	1	...	...	...
Condensed Milk	1	...	...	1	...	...	...
Chewing Gum	2	...	...	2	...	...	...
Cocoa	2	...	...	2	...	...	...
Salad Oil	2	...	...	2	...	...	...
Treacle	1	...	...	1	...	...	...
Ale	1	...	...	1	...	...	...
Pepper	2	...	...	2	...	...	...
TOTAL.	163	62	19	244	8	8	...

TABLE IXa.

Summonses issued under the "Sale of Food and Drugs Acts, 1875-9," and the "Margarine Act, 1887," during the year 1895.

No. of Sample.	Article.	Percentage of Adulteration.	Fines. £ s. d.	Remarks.
29	} Cheese ...	The fat contained 70% of foreign fat ...	1 0 0	Judgment upheld on appeal to Queen's Bench.
30				
31	Milk ...	8% of added water ...	5 0 0	} Second conviction.
33	Do. ...	10% do. ...	5 0 0	
174	Do. ...	18% do. ...	10 0 0	Second conviction
187	Do. ...	19% do. ...	0 7 0	
237	Do. ...	23% do. ...	} 10 0 0	Third conviction.
238	Do. ...	20% do. ..		
239	Do. ...	15% do. ...	10 0 0	
			£41 7 0	
The "Margarine Act, 1887."				
Two persons have been convicted during the year, and fines paid amounting to ...			2 5 0	
			£43 12 0	

TABLE X.

Slaughter House and Meat Inspection, fifty-two weeks ended 28th December, 1895.

Class of meat seized and destroyed.	Weight in stones of 14 lb.	No. of seizures.	No. of persons summoned.	No. of convictions.	Penalties.
Beef ...	30	1	1	1	£20

The Meat Inspectors have paid 5,369 visits to the 130 registered slaughter houses. Meat and fish to 1,404 stones weight was destroyed by the owners.

TABLE XI.
Smoke Inspector's Report.

Complaints received	...	...	...	...	20
Furnaces inspected	...	...	...	...	8,677
Observations taken of chimneys (for a period of sixty minutes each)	..	...	...	...	1,876
Average minutes of dense smoke emitted during each observation of one hour's duration	...	...	...	...	1.34
Total number of minutes' dense smoke	...	...	...	...	2,513
Smoke prevention appliances adapted to furnaces	...	...	...	...	83
Chimneys newly erected	..	...	...	...	24
Furnaces in connection with above	...	...	...	...	56
Notices served upon manufacturers	...	...	...	...	32
Do. do. stokers	...	...	...	...	61
Persons summoned before the magistrates	...	...	...	...	9
Do. convicted	...	...	...	...	8
Total amount in Fines	...	...	...	£4 0s. 0d.	

TABLE XII.
Work done by Disinfecting Staff.

Houses disinfected	..	..	1,786
Rooms „ (stripped, 257, lime-washed, 348)	..	...	4,936
Beds and mattresses disinfected	..	..	4,842
Articles of bed clothing	„	..	12,817
Articles of wearing apparel	„	..	24,799
Miscellaneous articles	„	..	7,282

FLUSHING.

During the 52 weeks of the year, six carts, each with two attendants, have been employed flushing drains. In this period 18,344 house drains, 86,784 outside drains, and the drains in connection with 137 schools, have been flushed. In addition to this, two men have been engaged putting in an iron solution into tanks connected with the sewers, and in this manner 15,500 gallons of disinfecting solution have been allowed to trickle into certain of the sewers.

TABLE XIII.

Cases removed to Hospital by our own Staff.
Classified according to diseases certified.

Small-pox.	Scarlet Fever.	Diphtheria.	Typhus Fever.	Typhoid Fever.	Other Diseases.	Total.
9	503	3	..	175	7	697

TABLE XIV.

Return for the fifty-two weeks ended December 28th, 1895, of patients in hospital.

	1 Small-pox.	2 Scarlet Fever.	3 Diphtheria.	4 Typhus Fever.	5 Enteric, or Typhoid Fever.	6 Other or doubtful cases.	7 Total.
No. in hospital on Saturday, 29th of Dec., 1894 ...	1	48	...	...	14	8	71
No. since admitted ...	9	495	...	...	142	105	751
No. discharged... ..	10	430	...	...	105	97	642
No. died	...	29	...	...	25	12	66
No. remaining in hospital, Dec. 28th, 1895	...	84	...	...	26	4	114

OTHER WORK OF REMOVAL STAFF.

In addition to the work as tabled, 206 persons were taken to Manston Cottages, 172 to Manston Hall, 124 from Manston Hall to Beckett Street, 85 from Beckett Street to Gildersome Convalescent Hospital, 24 from Manston Cottages to Ivy Lodge, 16 to Beckett Street, and 1 to the Workhouse.

TABLE XV
Canal Boats.

Registered during the 52 weeks	..	7
Transfers to fresh owners..	..	10
Struck off register	..	13
On register, December 28th, 1895	..	412
Visits of inspection	..	272

TABLE XVI.
Houses Let in Lodgings.

Registered during the year	..	—
Struck off register, removals, &c.	..	4
No. on register, December 28th, 1895	..	19
Visits of inspection	..	124

TABLE XVII.
Other work of Temporary Dwellings Inspector.

Visits of inspection to vans..	..	93
„ „ tents	..	—
„ „ common lodging-houses	..	30
„ „ overcrowded houses	..	6
„ houses as to drainage..	..	220
„ „ small-pox	..	3
„ as to pollutions of river Aire, &c.	..	38
		390

I reserve consideration of Reports, and Recommendations for preliminary report for 1896.

J. SPOTTISWOODE CAMERON.

TABLE A—Part 1.

Table shewing deaths recorded in the City of Leeds during the fifty-two weeks ended 28th December, 1895, classified according to cause, age, and the registration sub-districts or institutions in which they occurred.

TOWNSHIPS, &c. ...	LEEDS						Fever Hos- pitals. *	WORKHOUSES.												TOTAL			Annual rate per 1,000 pop.	DEATHS OF																							
	North.		West.		South E.			Hunslet.		Holbeck.		Wortley.		Kirkstall		Bramley		Chapel- town.		Osmond- thorpe.		In- firmary etc.		Leeds.		Hunslet.		Holbeck		Bramley		Mortality in City.		und. ov. 5 5	und. ov. 5 5	Out- siders occurring in City.											
	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5		und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5		und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5	und. ov. 5 5														
Re-estim. Pop. —395,546	61,312	84,756	33,756	62,865	25,924	53,732	35,485	15,828	21,457	431																																					
Under and over 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...									
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...								
Measles	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...								
Scarlatina	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...							
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...						
Croup (not spasmodic)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...						
Whooping cough	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Enteric fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Other or doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...					
Diarrhoea	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...				
Rheumatic fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...			
Acute & sub- acute rheu- matism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Ague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Heart disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Injury, &c. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Above causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
All other causes	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total under and over 5	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mortality per 1,000 per an.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* Including Manston Hospital, outside the city boundary, in which however there was no death in 1895. + These occurred in W.R. Asylums (Menston and Wakefield)

TABLE A, Part 3.

1895.—FIRST QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 30th March, 1895, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIPS. &c.	LEEDS						WORKHOUSES.												TOTAL			Annual rate per 1,000 pop.	DEATHS OF																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
	North.			West.			South E.			Hunslet.	Leeds.	Fever Hospital *	In- firmary etc.	Osmond- thorpe. 431	Chapel- town. 15,545	Bramley 16,406	Kirkstall 34,780	Wortley. 53,604	Holbeck. 24,815	Mortality in City.				Annual rate per 1,000 pop.	Leeds persons occurring outside City.	Out- siders occurring in City.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
	und. 5	ov. 5	all ages.	und. 5	ov. 5	all ages.	und. 5	ov. 5	all ages.											und. 5	ov. 5		all ages.				und. 5	ov. 5	all ages.	und. 5	ov. 5	all ages.	und. 5	ov. 5	all ages.	und. 5	ov. 5	all ages.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Estim. Pop.— 395,546	64,331	87,519	34,860	63,255	24,815	53,604	34,780	16,406	15,545	431																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</

* There was no death at Manston during the quarter. There was one death at Manston during the quarter.

TABLE A, Part 4.

1895.—SECOND QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 29th June, 1895, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIPS, &c. ...	LEEDS						WORKHOUSES.								TOTAL			Annual rate per 1,000 pop.	DEATHS OF															
	North.		West.		South E.		Hunslet.	Holbeck.	Wortley.	Kirkstall.	Bramley	Chapel- town.	Osmond- thorpe.	In- firmary etc.	Fever Hospital *	Leeds.			Hunslet.			Holbeck.			Bramley			Mortality in City.						
	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5										und. 5	ov. 5		und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5
Provisionally Estim. Pop.— 395,546	64,331	87,519	34,860	63,255	24,815	53,604	34,780	16,406	15,545	431																								
Under and over 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5		
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Measles	7	...	...	...	...	2	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Scarlatina	1	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...		
Diphtheria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Croup (not spasmodic)	2	1	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping cough	5	...	...	...	6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Other or doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhoea	11	...	...	...	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rheumatic fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Acute & sub- acute rheu- matism	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Erysipelas	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pyæmia	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Phthisis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bronchitis,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pneumonia,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pleurisy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Heart disease	1	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Injury, &c. ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Under and over 5	55	70	64	120	21	45	37	66	22	30	11	29	5	27	6	17	1	52	1	32	2	7	...	...	...	...	...	...	...	...	...	...	...	...
All other causes	61	49	76	98	40	34	59	66	30	37	27	33	12	29	12	21	...	24	8	62	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	235	...	338	...	140	...	228	...	119	...	100	...	73	...	56	...	9	79	2	107	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Mortality per 1,000 per an	14.7	15.5	16.1	14.5	19.2	14.5	11.5	17.9	14.5	18.6	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

* There was no death at Manston during the quarter.

TABLE A, Part 5.

1895.—THIRD QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 28th September, 1895, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIPS, &c. ...	L E E D S						Fever Hospital *	W O R K H O U S E S .						T O T A L			D E A T H S O F				
	North.		West.		South E.			Chapel- town.	Whitkirk 431	In- firmary.	Leeds.			Hunslet.	Holbeck.	Bramley	Mortality in City.		Annual rate per 1,000 pop.	Leeds persons occurring outside City.	Out- siders occurring in City.
	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5					und. 5	ov. 5	und. 5				ov. 5	und. 5			
Estim. Pop.— 395,546	64,331	87,519	34,860	63,255	24,815	53,604	34,780	16,406	15,545												
Under and over 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	
Small-pox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles	2	6	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	
Scarlatina	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diphtheria	2	1	...	...	...	1	2	...	...	2	...	...	...	...	...	...	...	...	...	...	
Croup (not spasmodic)	...	...	...	1	...	5	2	...	...	...	...	...	...	...	...	...	...	...	...	...	
Whooping cough	4	2	...	...	8	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	
Typhus	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric	1	2	...	2	...	4	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
Other or doubtful	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Diarrhoea	87	71	1	104	48	58	24	7	9	...	...	...	...	...	...	...	...	...	...	...	
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rheumatic fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Acute&sub- acute rheu- matism	...	...	1	...	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	...	
Erysipelas	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	
Pyæmia	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal fever	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Ague	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Phthisis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Bronchitis,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pneumonia,	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pleurisy	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Heart disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Injury, &c.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Under and over 5	118	102	79	66	62	74	35	9	12	27	...	...	...	...	...	...	...	...	...	...	
All other causes	101	96	92	65	37	62	51	16	15	47	4	25	...	...	...	...	...	...	...	...	
Total	316	369	192	355	154	210	143	59	58	85	60	...	...	...	...	...	...	...	...	...	
Mortality per 1,000 per an.	19.7	16.9	22.1	22.5	24.9	18.0	16.5	14.4	15.0	...	...	...	...	...	...	...	...	...	...	...	

* There was no death at Manston during the quarter. † No return received during quarter.

TABLE A, Part 6.

1895.—FOURTH QUARTER.

Table shewing Deaths recorded in the City of Leeds during the thirteen weeks ended 28th December, 1895, classified according to cause, age, and the registration sub-districts in which they occurred.

TOWNSHIPS, &c. ...	LEEDS						Fever Hospital *	WORKHOUSES.				TOTAL			Annual rate per 1,000 pop.	DEATHS OF	
	North.		West.		South E.			Leeds.	Hunslet.	Holbeck.	Bramley	Mortality in City.		Leeds persons occurring outside City.		Out- siders occurring in City.	
	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5						und. 5	ov. 5				und. 5	ov. 5	und. 5	ov. 5
Estim. Pop.— 395,546	64,331	87,519	34,860	63,255	24,815	53,604	34,780	16,406	15,545	431							
Under and over 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	und. 5	ov. 5	
Small-pox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Measles ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Scarlatina ...	1	1	1	...	...	2	...	...	...	...	...	...	...	...	...	...	
Diphtheria ...	...	1	...	...	1	1	...	1	...	...	...	...	...	...	...	...	
Croup (not spasmodic) }	2	6	1	...	1	...	...	...	...	...	...	...	...	...	...	...	
Whooping cough }	12	5	8	...	2	4	6	3	1	...	...	...	...	...	...	...	
Typhus ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Enteric ...	...	5	...	7	...	2	...	...	1	...	...	...	...	...	...	...	
Other or doubtful }	...	...	...	...	...	10	...	...	...	...	...	...	...	...	...	...	
Diarrhoea ...	10	10	11	20	2	14	5	6	2	...	...	...	...	...	...	...	
Cholera ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Rheumatic fever }	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Acute & sub- acute rheu- matism }	...	1	...	2	...	...	1	...	...	...	...	...	...	...	...	...	
Erysipelas ...	1	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	
Pyæmia ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Puerperal fever }	...	...	1	...	1	1	...	...	2	...	...	...	...	...	...	1	
Ague ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Phthisis ...	...	19	...	...	...	1	...	...	...	...	...	...	...	...	...	...	
Bronchitis, }	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Pneumonia, }	40	36	25	31	12	23	14	12	6	...	...	...	...	...	...	...	
Pleurisy ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
Heart disease	10	30	...	9	4	17	...	...	5	...	...	...	...	...	...	2	
Injury, &c. ...	2	1	3	4	2	1	...	...	...	...	...	...	...	...	...	3	
Under and over 5	67	67	50	88	21	48	25	22	9	...	...	...	...	...	...	...	
All other causes }	88	60	36	90	17	74	24	16	9	1	...	...	...	...	...	...	
Total ...	277	339	162	291	98	249	126	60	52	1	...	...	...	...	...	...	
Mortality per 1,000 per an	17.3	15.5	18.7	18.5	15.9	18.6	14.5	14.7	13.4	9.3	...	...	...	...	...	...	

* There was no death at Manston during the quarter. † No return received during quarter.

TABLE B.

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the 52 weeks of 1895, in the Urban Sanitary District of Leeds; classified according to Diseases, Ages, and Localities.

Names of Localities adopted for the purpose of these Statistics.	Population at all ages.		Registered Births.	Aged under 5, 5 under 15, 15 upwards.	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health.													Number of such Cases Removed from their Homes in the several Localities for Treatment in the Isolation Hospital.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	(a.)	(b.)			(c.)	(d.)	(e.)	1	2	3	4	Fever.					Cholera.	Erysipelas.	Other.	TOTAL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
												Typbus.	Enteric or Typhoid.	Continued.	Relapsing.	Puerperal.					1	2	3	4	5	6	7	8	9	10	11	12	13																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
North (H) ...	...	60,618	61,312	Under 5 5 under 15 15 upwards	2,343	...	68	4	3	...	7	...	...	...	...	2	6	3	87	...	42	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...</

Notification has been compulsory since the 1st of May, 1894. The Borough General Fever Hospital (the old House of Recovery) is situated in the district marked H. All small-pox cases during 1895 were admitted to Manston, outside the borough, but close to the boundary (Osmondthorpe). Cases admitted to the Isolation Hospitals from outside the borough are not included in this table. Three cases of chickenpox, reported as smallpox, but counted in column 12, were isolated in one of the quarantine cottages at Manston. Two other cases in column 12 were notified as English cholera but left at home. Of the remaining cases in column 12, 33 were originally returned as typhoid, and 22 as scarlet fever, but the diagnosis revised in hospital.

TABLE B, Part 2.

The following new cases of Infectious Sickness were reported during the life of the patient in the several Registration Sub-districts and Wards of the City of Leeds during the thirteen weeks ended March 30th, 1895.

	Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhoid fever.	Typhus fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North.....	{ Hosp. .. 16 Home ... 6	16 6	... 1	... 1	1 ...	...	...	...	8	...	7	24 } 17 } 41
	West.....	{ Hosp. 1 18 Home ... 19	18 19	... 7	... 10	1 3	...	...	...	...	...	3	23 } 65 } 88
	South-East.	{ Hosp. .. 11 Home ... 7	11 7	... 3	... ..	1 ...	...	...	...	7	...	3	15 } 18 } 33
	Hunslet.....	{ Hosp. 7 6 Home ... 7	6 7	... 3	... 2	... 1	...	...	...	8	...	1	14 } 23 } 37
	Holbeck	{ Hosp. . 2 Home .. 3	2 3	... 2	... 1	... 1	...	...	...	8	...	...	2 } 16 } 18
	Wortley.....	{ Hosp. ... 9 Home ... 13	9 13	... 4	... ..	1 6	...	...	...	10	...	2	12 } 33 } 45
	Kirkstall	{ Hosp. ... 7 Home ... 8	7 8	... 18	... ..	... ...	...	...	...	7	...	...	7 } 33 } 40
	Bramley.....	{ Hosp. ... 6 Home ... 3	6 3	... 1	... ..	... ...	...	...	...	5	...	...	6 } 9 } 15
	Chapeltown..	{ Hosp. ... 2 Home ... 2	2 2	... ..	... 1	1 ...	...	...	...	2	...	1	4 } 5 } 9
	Osmondthorpe.....	{ Hosp. ... Home ..	... ..	... ..	... ..	... ..	...	...	...	...	...	...	... ...
WARDS.	Central	{ Hosp. ... 3 Home ... 1	3 1	... 1	... ..	1 ...	...	...	...	...	...	4	8 } 3 } 11
	North... ..	{ Hosp. ... 9 Home .. 5	9 5	... ..	... 2	1 ...	...	...	...	4	...	2	12 } 12 } 24
	North-East.....	{ Hosp. ... 5 Home ... 2	5 2	... ..	... ..	... ...	...	...	...	4	...	2	7 } 6 } 13
	East.....	{ Hosp. ... 11 Home .. 7	11 7	... 3	... ..	1 ...	...	...	...	6	...	2	14 } 17 } 31
	South.. ..	{ Hosp. 6 Home ... 1	6 1	... ..	... ..	... ...	...	...	...	2	...	2	8 } 3 } 11
	East-Hunslet.....	{ Hosp. 1 2 Home ... 4	2 4	... 3	... 1	... ...	...	...	...	2	...	...	3 } 12 } 15
	West-Hunslet.....	{ Hosp. ... 4 Home ... 5	4 5	... ..	... ..	... 1	...	...	...	8	...	...	4 } 14 } 18
	Holbeck.....	{ Hosp. .. 2 Home	2 ...	... 2	... 2	... 1	...	...	...	5	...	1	2 } 11 } 13
	Mill Hill.....	{ Hosp. ... 2 Home	2 ...	... 1	... ..	... ...	...	...	...	2	...	2	4 } 4 } 8
	West.....	{ Hosp. ... 8 Home ... 4	8 4	... 3	... 9	1 2	...	...	...	13	...	...	9 } 31 } 40
	North-West.....	{ Hosp. 1 2 Home ... 13	2 13	... 2	... ..	... 1	...	...	...	7	...	1	4 } 23 } 27
	Brunswick.....	{ Hosp. ... 6 Home ... 2	6 2	... 1	... 1	... ...	...	...	...	4	...	...	6 } 8 } 14
	New Wortley.....	{ Hosp. ... Home .. 3	... 3	... 1	... ..	... 2	...	...	...	7	...	1	1 } 13 } 14
	Armley & Wortley	{ Hosp. ... 10 Home ... 10	10 10	... 3	... ..	1 4	...	...	...	1	...	1	12 } 18 } 30
	Bramley.....	{ Hosp. ... 6 Home ... 3	6 3	... 1	... ..	... ...	...	...	...	7	...	...	6 } 11 } 17
	Headingley	{ Hosp. ... 7 Home ... 8	7 8	... 18	... ..	... ..	...	...	...	7	...	...	7 } 33 } 40
CITY.....		{ Hosp. 8 Home ... Cases 8	77 68 145	... 39 39	... 15 15	5 11 16	... .. ...	... 1 1	... 4 4	... 80 80	... ... ...	17 1 18	107 } 219 } 326 326

TABLE B, Part 3.

The following new cases of Infectious Sickness were reported during the life of the patient in the several Registration Sub-districts and Wards of the City of Leeds during the thirteen weeks ended June 29th, 1895.

		Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhoid fever.	Typhus fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North.....	{ Hosp.	..	15	...	...	5	...	...	...	...	..	3	23
		{ Home	...	2	1	3	3	...	...	1	12	...	...	22
	West.....	{ Hosp.	...	16	...	...	4	...	...	...	...	...	10	30
		{ Home	...	6	2	6	5	...	1	1	19	..	1	41
	South-East.	{ Hosp.	..	7	..	...	1	...	...	...	..	...	...	8
		{ Home	...	1	1	1	1	...	..	1	2	...	...	7
	Hunslet.....	{ Hosp.	...	20	...	...	...	...	...	...	...	...	1	21
		{ Home	...	11	2	2	2	...	...	1	4	...	1	23
	Holbeck	{ Hosp.	..	...	...	...	3	...	...	...	...	...	2	5
		{ Home	..	5	1	...	2	...	..	1	8	...	...	17
Wortley.....	{ Hosp.	...	6	...	...	3	...	...	...	...	...	2	11	
	{ Home	...	9	2	...	2	...	1	...	8	...	...	22	
Kirkstall	{ Hosp.	1	3	...	...	...	...	...	...	...	...	..	4	
	{ Home	...	10	4	2	1	...	...	2	5	...	...	24	
Bramley.....	{ Hosp.	...	3	...	...	...	...	...	...	...	...	..	1	4
	{ Home	...	1	...	...	...	...	...	...	1	...	...	2	
Chapeltown..	{ Hosp.	...	...	...	..	...	...	...	...	...	...	..	...	...
	{ Home	...	...	1	1	2	...	...	...	1	...	..	5	
Osmondthorpe....	{ Hosp.	...	...	...	...	...	...	...	..	...	...	...	...	...
	{ Home	..	...	...	...	...	..	..	...	...	...	...	...	...
WARDS.	Central.....	{ Hosp.	...	2	...	...	1	...	...	...	...	..	2	5
		{ Home	...	...	...	...	...	...	...	...	2	...	...	2
	North... ..	{ Hosp.	...	6	...	...	3	...	..	...	...	...	...	9
		{ Home	..	1	...	2	4	...	...	...	7	...	...	14
	North-East.....	{ Hosp.	...	8	...	...	1	...	...	...	...	...	1	10
		{ Home	...	1	1	2	1	...	...	1	3	...	...	9
	East.....	{ Hosp.	...	3	...	...	...	...	...	..	...	...	...	3
		{ Home	..	1	...	1	...	...	...	1	2	...	...	5
	South.. ..	{ Hosp.	..	11	...	...	1	...	...	...	...	...	...	12
		{ Home	...	1	3	2	1	...	...	...	1	...	..	8
	East-Hunslet.....	{ Hosp.	...	7	...	...	...	...	...	...	...	...	...	7
		{ Home	...	10	...	...	1	...	...	1	2	...	...	14
	West-Hunslet.....	{ Hosp.	...	5	..	...	...	...	...	..	...	...	1	6
		{ Home	...	...	...	...	1	..	...	...	3	...	1	5
	Holbeck.....	{ Hosp.	..	...	...	...	3	...	...	...	...	...	2	5
		{ Home	..	5	1	...	2	...	...	1	6	...	..	15
	Mill Hill.....	{ Hosp.	...	5	...	...	2	...	...	...	...	...	..	7
{ Home		...	1	...	...	...	...	..	...	5	...	...	6	
West.....	{ Hosp.	...	5	...	...	2	...	...	...	...	...	4	11	
	{ Home	...	...	...	4	2	...	..	1	6	...	..	13	
North-West.....	{ Hosp.	...	5	...	...	...	...	...	...	...	...	5	10	
	{ Home	...	4	1	1	2	...	1	...	5	...	1	15	
Brunswick....	{ Hosp.	...	1	...	...	...	...	...	...	...	...	1	2	
	{ Home	...	1	2	1	1	...	...	...	4	...	...	9	
New Wortley.....	{ Hosp.	...	...	...	...	...	...	...	...	...	...	...	...	...
	{ Home	..	3	..	...	1	...	1	...	2	...	...	7	
Armley & Wortley	{ Hosp.	...	6	...	...	2	...	...	..	...	...	2	10	
	{ Home	...	6	2	..	1	...	...	...	5	..	...	14	
Bramley.....	{ Hosp.	...	3	...	...	1	...	...	...	...	...	1	5	
	{ Home	...	1	...	...	...	..	...	..	2	...	...	3	
Headingley.	{ Hosp.	1	3	...	...	...	...	...	..	...	..	...	4	
	{ Home	...	10	4	2	1	..	...	2	5	...	...	24	
CITY.....	{ Hosp.	1	70	...	...	16	...	...	...	..	..	19	106	
	{ Home	...	45	14	15	18	..	2	7	60	...	2	163	
	{ Cases	1	115	14	15	34	...	2	7	60	...	21	269	

TABLE B, Part 4.

The following new cases of Infectious Sickness were reported during the life of the patient in the several Registration Sub-districts and Wards of the City of Leeds during the thirteen weeks ended September 28th, 1895.

		Where treated.	Small-pox.	Scarlet fever.	Diphtheria	Membranous croup.	Typhoid fever.	Typhus fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North.....	Hosp.	..	66	...	...	9	...	...	...	...	..	4	79
		Home	...	23	5	...	6	..	...	..	13	...	...	47
	West.....	Hosp.	...	14	..	...	9	...	...	...	...	..	7	30
		Home	...	17	8	1	11	...	2	1	13	..	...	53
	South-East.	Hosp.	..	23	..	...	5	...	...	...	..	...	...	28
		Home	...	8	...	...	8	...	..	...	4	...	1	21
	Hunslet.....	Hosp.	...	37	...	...	10	...	...	...	...	...	...	47
		Home	...	31	1	1	13	...	...	...	7	...	2	55
	Holbeck	Hosp.	..	2	...	...	1	...	...	...	...	...	...	3
		Home	..	6	2	..	7	...	..	1	3	...	2	21
Wortley.....	Hosp.	...	10	...	...	10	...	...	...	...	...	8	28	
	Home	..	12	4	2	19	...	...	1	8	...	...	46	
Kirkstall	Hosp.	...	19	...	...	1	...	...	...	...	...	...	20	
	Home	...	19	7	..	6	...	2	...	7	...	...	41	
Bramley.....	Hosp.	...	1	...	...	..	..	...	...	...	...	..	1	
	Home	...	1	1	...	5	...	...	...	4	...	...	11	
Chapelton	Hosp.	...	5	...	..	1	...	..	...	...	..	...	6	
	Home	...	2	2	1	3	...	1	...	1	...	...	10	
Osmondthorpe....	Hosp.	...	...	...	...	...	...	..	..	...	...	...	...	
	Home	..	...	...	...	...	...	..	...	...	...	...	...	
WARDS.	Central	Hosp.	...	2	..	...	2	...	...	...	..	...	...	4
		Home	...	6	...	...	1	...	...	...	3	...	...	10
	North... ..	Hosp.	...	33	...	...	5	...	..	...	...	...	3	41
		Home	..	7	4	...	4	...	...	...	4	...	...	19
	North-East.....	Hosp.	...	31	...	...	3	...	...	...	...	...	1	35
		Home	...	10	3	...	1	...	...	..	7	...	...	21
	East.....	Hosp.	...	22	...	...	4	...	...	..	...	...	...	26
		Home	..	8	...	...	3	...	..	...	4	...	...	15
	South.. ..	Hosp.	..	17	...	...	1	...	...	...	...	...	...	18
		Home	...	...	1	...	6	...	...	...	2	...	1	10
	East-Hunslet.....	Hosp.	...	20	...	...	5	...	...	...	...	...	...	25
		Home	...	23	...	...	10	...	...	...	3	...	...	36
	West-Hunslet	Hosp.	...	5	..	...	5	...	...	..	...	...	...	10
		Home	..	10	...	1	3	..	...	...	3	...	2	19
	Holbeck.....	Hosp.	..	...	...	...	1	...	...	...	...	...	..	1
		Home	..	4	2	...	6	...	...	1	2	...	2	17
	Mill Hill.....	Hosp.	...	2	...	...	...	...	...	...	...	...	1	3
		Home	...	1	...	...	4	...	..	...	2	...	...	7
	West.....	Hosp.	...	9	...	...	3	...	..	...	...	...	6	18
		Home	...	3	2	1	3	...	1	1	4	...	..	15
North-West.....	Hosp.	...	2	...	...	3	...	...	...	...	...	...	5	
	Home	...	11	5	...	2	...	..	...	3	...	...	21	
Brunswick	Hosp.	...	1	...	...	3	...	...	...	...	...	...	4	
	Home	...	2	1	...	2	...	1	..	4	...	...	10	
New Wortley.....	Hosp.	...	4	...	...	4	...	...	...	...	...	5	13	
	Home	..	4	3	...	10	...	...	...	2	...	...	19	
Armley & Wortley	Hosp.	...	6	...	...	6	...	...	..	...	...	3	15	
	Home	...	5	1	2	9	...	...	1	5	..	...	23	
Bramley.....	Hosp.	..	1	...	...	...	...	...	..	...	...	...	1	
	Home	...	4	1	...	5	...	...	..	5	...	...	15	
Headingley.....	Hosp.	..	22	...	...	1	...	...	...	...	..	...	23	
	Home	...	21	7	1	9	..	3	...	7	...	...	48	
CITY.....	Hosp.	...	177	...	...	46	...	...	...	..	..	19	242	
	Home	...	119	30	5	78	..	5	3	60	...	5	305	
	Cases	...	296	30	5	124	...	5	3	60	...	24	547	

TABLE B, Part 5.

The following new cases of Infectious Sickness were reported during the life of the patient in the several Registration Sub-districts and Wards of the City of Leeds during the thirteen weeks ended December 28th, 1895.

		Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhoid fever.	Typhus fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North.....	Hosp.	..	29	...	...	18	...	...	...	...	..	3	50
		Home	...	14	7	...	27	..	I	I	14	...	...	64
	West.....	Hosp.	...	36	...	...	13	...	...	...	...	...	2	51
		Home	...	29	11	2	27	...	2	2	20	..	...	93
	South-East.	Hosp.	..	29	..	...	3	...	...	...	..	...	...	32
		Home	...	10	3	I	7	...	..	I	7	...	...	29
	Hunslet.....	Hosp.	...	30	...	...	15	...	...	...	...	...	2	47
		Home	...	18	3	...	35	...	4	I	12	...	...	73
	Holbeck	Hosp.	.	5	...	...	2	...	...	...	...	...	2	9
		Home	..	13	3	...	14	...	6	I	9	...	...	46
Wortley.....	Hosp.	...	14	...	...	19	...	...	...	...	...	3	36	
	Home	...	32	2	...	40	...	...	2	21	...	...	97	
Kirkstall	Hosp.	...	20	...	...	4	...	...	...	...	...	...	24	
	Home	...	15	14	...	11	...	...	...	6	...	...	46	
Bramley.....	Hosp.	...	4	...	...	2	..	...	...	...	...	...	6	
	Home	...	16	I	...	4	...	...	I	I	...	...	23	
Chapelton	Hosp.	...	I	...	..	...	...	..	...	...	..	...	I	
	Home	...	2	2	I	4	...	...	2	5	...	..	16	
Osmondthorpe....	Hosp.	...	...	...	...	...	...	...	...	...	...	...	...	
	Home	..	...	...	...	...	..	...	...	...	...	...	...	
WARDS.	Central.....	Hosp.	...	6	...	...	I	...	...	...	...	...	...	7
		Home	...	8	3	...	9	...	...	I	5	...	...	26
	North... ..	Hosp.	...	11	...	...	11	...	..	...	...	...	...	22
		Home	.	5	5	I	17	...	...	2	9	...	...	39
	North-East.....	Hosp.	...	13	...	...	6	...	...	...	...	...	3	22
		Home	...	2	1	...	6	...	I	...	4	...	...	14
	East.....	Hosp.	...	26	...	...	3	...	...	..	...	...	...	29
		Home	..	10	3	I	5	...	...	I	6	...	...	26
	South.. ..	Hosp.	...	6	...	...	I	...	...	...	...	...	...	7
		Home	...	3	...	...	6	...	...	...	4	...	..	13
	East-Hunslet.....	Hosp.	...	25	...	...	6	...	...	...	...	...	2	33
		Home	...	12	2	...	11	...	...	I	2	...	...	28
	West-Hunslet.....	Hosp.	...	2	..	...	7	...	...	...	...	...	...	9
		Home	...	4	3	...	17	..	4	...	6	...	...	34
	Holbeck.....	Hosp.	..	4	...	...	3	...	...	...	...	...	2	9
		Home	..	12	I	...	16	...	6	I	10	...	...	46
Mill Hill.....	Hosp.	...	21	...	...	...	...	...	...	...	...	...	21	
	Home	...	I	...	I	3	...	...	...	2	...	...	7	
West.....	Hosp.	...	6	...	...	8	...	...	...	...	...	2	16	
	Home	...	6	3	I	6	...	..	...	5	...	..	21	
North-West.....	Hosp.	...	6	...	...	2	...	...	...	...	...	...	8	
	Home	...	16	3	..	15	...	2	I	11	...	...	48	
Brunswick....	Hosp.	...	3	...	...	3	...	...	...	...	...	...	6	
	Home	...	7	5	...	3	...	...	I	3	...	...	19	
New Wortley.....	Hosp.	...	10	...	...	12	...	...	...	...	...	2	24	
	Home	..	21	1	...	18	...	...	...	6	...	...	46	
Armley & Wortley	Hosp.	...	4	...	...	7	...	...	..	...	...	I	12	
	Home	...	11	I	..	22	...	...	I	12	..	...	47	
Bramley.....	Hosp.	...	4	...	...	I	...	...	..	...	...	...	5	
	Home	...	16	I	...	4	..	...	2	4	...	...	27	
Headingley	Hosp.	...	21	...	...	5	...	...	...	...	..	...	26	
	Home	...	15	14	...	11	..	...	...	6	...	...	46	
CITY.....	Hosp.	...	168	...	...	76	...	...	...	..	...	12	256	
	Home	...	149	46	4	169	..	13	11	95	...	...	487	
	Cases	...	317	46	4	245	...	13	11	95	...	12	743	

North District and N.E. Ward had one extra hospitalised case of scarlet fever, making totals 318 and 741. This correction was made in B 1 after B 5 had been stereotyped.

TABLE B, Part 6.

The following new cases of Infectious Sickness were reported during the life of the patient in the several Registration Sub-districts and Wards of the City of Leeds during the thirteen weeks ended March 28th, 1896.

	Where treated.	Small-pox.	Scarlet fever.	Diphtheria.	Membranous croup.	Typhus fever.	Typhoid fever.	Continued fever.	Puerperal fever.	Erysipelas.	Cholera.	Other.	TOTALS.
SUB-DISTRICTS.	North.....	{ Hosp. .. 11 Home ... 8	7	...	...	...	6	...	...	...	...	2	19
	West.....	{ Hosp. ... 19 Home ... 13	11	...	...	...	5	...	...	...	...	6	31
	South-East.	{ Hosp. .. 9 Home ... 5	...	...	...	...	5	...	...	...	...	1	15
	Hunslet.....	{ Hosp. ... 21 Home ... 22	...	...	...	...	...	...	...	...	...	3	24
	Holbeck	{ Hosp. . 6 Home .. 4	3	...	...	...	3	...	...	...	...	...	9
	Wortley.....	{ Hosp. ... 5 Home ... 13	1	...	...	...	2	...	...	...	...	1	8
	Kirkstall	{ Hosp. ... 15 Home ... 11	6	...	...	...	1	...	...	...	...	1	17
	Bramley.....	{ Hosp. ... 2 Home ... 2	1	...	...	...	...	...	...	...	...	...	2
	Chapeltown..	{ Hosp. Home ... 1	6	...	...	...	...	...	...	...	...	...	...
	Osmondthorpe....	{ Hosp. Home	...	...	...	...	...	...	...	...	...	...	...
WARDS.	Central.....	{ Hosp. ... 3 Home ... 6	5	...	...	...	...	...	...	...	...	1	4
	North... ..	{ Hosp. ... 4 Home .. 2	2	...	...	...	4	...	...	...	...	...	8
	North-East.....	{ Hosp. ... 3 Home ... 1	2	...	...	...	2	...	...	...	...	1	6
	East.....	{ Hosp. ... 8 Home .. 4	...	...	...	...	5	...	...	...	...	1	14
	South.. ..	{ Hosp. ... 2 Home ... 6	...	...	...	...	...	...	...	...	...	1	3
	East-Hunslet.....	{ Hosp. ... 15 Home ... 6	...	...	...	...	...	...	...	...	...	1	16
	West-Hunslet	{ Hosp. ... 5 Home . 13	1	...	...	...	2	...	...	...	...	1	6
	Holbeck.....	{ Hosp. .. 6 Home .. 2	3	...	...	...	3	...	...	...	...	...	9
	Mill Hill.....	{ Hosp. ... 9 Home ... 1	...	...	...	...	1	...	...	...	...	3	13
	West.....	{ Hosp. ... 6 Home ... 1	2	...	...	...	1	...	...	...	...	1	8
	North-West.....	{ Hosp. ... 3 Home ... 7	1	...	...	...	2	...	...	...	...	1	7
	Brunswick.... ..	{ Hosp. ... 2 Home ... 4	2	...	...	...	1	...	...	...	...	1	4
	New Wortley.....	{ Hosp. ... 3 Home .. 9	...	...	...	...	1	...	...	...	...	1	5
	Armley & Wortley	{ Hosp. ... 2 Home ... 3	1	...	...	...	1	...	...	...	...	...	3
	Bramley.....	{ Hosp. ... 2 Home ... 3	1	...	...	...	...	...	...	...	...	...	2
	Headingley.....	{ Hosp. ... 15 Home ... 11	9	...	...	...	1	...	...	...	...	1	17
	CITY.....	{ Hosp. ... 88 Home ... 79 Cases ... 167	1	36	5	...	22	39	10	73	...	14	125
			37	5	...	61	...	10	73	...	16	...	369

TABLE C.

Table shewing Deaths recorded in the City of Leeds during the fifty-two weeks ended 28th December, 1895, classified according to cause, age, and the registration sub-districts to which the patients belonged. Deaths in Institutions allocated to districts to which patients belonged.

[illegible]

TABLE C.—(Continued).

TOWNSHIPS, &c.	LEEDS.						Deaths of Out- siders occurring in City.	TOTAL mortality in City.			Annual rate per 1,000 pop.
	North.		West.		South E.			under 5	over 5	all ages.	
	und 5	ov. 5	und 5	ov. 5	und 5	ov. 5					
Under and over 5	1	...	2	...	1	...	10	...	10	0.03	
Stomatitis ...	16	...	24	...	6	...	140	...	140	0.36	
Dentition ...	...	...	...	...	...	...	1	...	4	0.01	
Tonsillitis, &c. ...	...	...	...	...	...	...	16	...	38	0.10	
Dis. of Stomach ...	27	3	22	4	8	...	87	17	104	0.26	
Enteritis ...	...	4	...	...	...	...	...	25	25	0.06	
Hernia...	...	4	...	...	...	...	...	2	2	0.01	
Fistula ...	...	4	...	...	...	...	...	26	31	0.08	
Peritonitis ...	...	1	...	...	...	...	...	3	3	0.01	
Ascitis ...	...	1	...	...	...	...	...	7	15	0.04	
Jaundice ...	...	1	...	...	...	...	...	39	40	0.10	
Cirrhosis ...	...	5	1	...	...	...	1	30	31	0.08	
Dis. of Liver ...	...	2	...	...	...	...	...	34	47	0.12	
Dis. of Bowels ...	2	5	4	6	...	...	13	...	...	...	
Disease of Ductless Glands ...	...	1	...	2	...	...	...	8	8	0.02	
Nephritis ...	2	9	...	18	1	...	4	63	67	0.17	
Kidney Disease ...	...	14	...	16	...	...	1	75	76	0.19	
Albuminuria ...	...	2	...	3	...	...	1	8	9	0.02	
Other Urinary ...	1	3	...	6	...	...	1	19	20	0.05	
Dis. of Generative Organs ...	...	7	...	3	...	...	1	17	18	0.05	
Childbirth ...	2	1	1	6	...	...	13	33	46	0.12	
Disease of Bones (20) Joints (6) Arthritis (7)	1	2	2	6	...	...	7	26	33	0.08	
Ulcer: Phlegmon (0) Skin Disease ...	...	1	...	3	1	...	...	13	13	0.03	
Injury ...	9	21	15	39	12	25	66	213	279	0.71	
Lead Poisoning ...	...	1	...	...	...	...	...	3	2	0.01	
Mortification ...	...	3	...	...	...	...	1	9	10	0.03	
Debility... ..	8	...	16	...	3	1	58	5	63	0.16	
Marasmus. Atrophy ...	49	...	43	1	48	...	289	6	295	0.75	
Tumour ...	...	2	1	11	...	...	1	25	26	0.07	
Abscess ...	2	1	6	9	2	...	14	33	47	0.12	
Other causes ...	...	...	...	...	...	...	1	...	1	0.00	
Total under 5 and over 5... ..	655	726	583	992	392	444	3,396	4,505	8,101	...	
Total ...	1,381	1,675	836	1,314	587	1,054	167	8,101	20,55	...	
Mortality per 1,000 per annum ...	22.60	19.83	24.85	20.97	23.25	19.68	...	20.55	...	...	

NOTES TO TABLE C.

This table is printed for the first time in the report for 1892. In it the causes of death are more detailed than in the other tables. They are classified as in Table A, part 1, according as the deaths were those of persons under or over the age of five. All the deaths which occurred in the following public institutions: the Infirmary, the Women and Children's Hospital, the Borough Fever and Small-pox Hospitals, the Leeds, Hunslet, Holbeck, and Bramley Workhouses, have been classified under the districts to which the patients belonged. The 167 deaths of persons who belonged to no district in the city have been separated in two columns by themselves, as deaths of outsiders; these deaths are, however, included in the total mortality of the city. As far as possible, the order of the Registrar-General has been followed in the arrangement of this table. The horizontal lines correspond with the groups in the Registrar-General's annual report.

Septicæmia includes deaths from pyæmia (3), phlebitis (1), phagedæna (0), septicæmia (not puerperal) (9). *Parasitic* diseases were all due to thrush (10). *Starvation* includes scurvy, purpura hæmorrhagica (2), privation and want of breast milk (from which, however, there was no death), and inanition (53 deaths), *Rheumatic fever* in reports previous to 1892 had only the deaths ascribed in those terms to this disease by the medical attendant. Deaths from acute and sub-acute rheumatism had previously been classed under "rheumatism." A separate line has been given, both in Table C, Table A, and Tables 17 and 18, to prevent confusion and enable comparison. "*Rheumatism*" includes chronic rheumatism and disease simply described as "rheumatism" (see Report, 1893, page 144). *Anæmia* includes chlorosis (0), hæmophilia (2), but not leucocythemia; deaths from the latter, had any occurred, would have been referred to diseases of the *ductless glands*. In *malformations* are included cyanosis (1), patent foramen ovale (1), spina bifida (7), atelectasis (18), imperforate anus (1), cleft palate (1), harelip (1), and (14) other congenital defects.

Brain disease includes deaths registered from such causes as cerebral congestion, cerebral apoplexy, cerebral meningitis, and softening of the brain. *Meningitis* includes diseases classified as meningitis (87), and spinal (0) meningitis, but not tuberculous. *Apoplexy* includes all apoplexies not otherwise defined. *Paralysis* includes hemiplegia, paraplegia, and "paralysis." *General paralysis* (8) is included under insanity, and does not include deaths from "softening of the brain." *Convulsions* includes diseases so certified, and 5 deaths due to "fits." Fits of apoplexy, &c., come under other headings. We have tried, as far as possible, to keep to the old headings.

Endocarditis, &c., includes valvular disease of the heart. "Heart disease" includes such diseases as hypertrophy, atrophy, fatty degeneration, weak heart, cardiac disease or degeneration and "disease of the heart." *Angina pectoris* includes only those deaths in which the symptom but no disease is stated. *Aneurism* includes all the aneurisms so stated. *Other diseases of the circulatory system* include atheroma. *Other respiratory diseases* includes asthma (13), emphysema (7), empyæma (16), pulmonary congestion (31), "lung disease" (0), and others (11). *Diseases of the stomach* include dyspepsia, hæmatemesis, gastritis. *Diseases of the bowels* include melæna (1), ulcer of intestines, obstruction of bowels, strangulation not due to hernia, intussusception. *Kidney disease* includes deaths from granular kidney (3), Bright's disease (67), other kidney diseases (5), and uræmia (1). *Albuminuria* includes only deaths in which the symptom without any pathological cause was registered. *Diseases of the urinary system* includes calculus, hæmaturia, cystitis and other diseases of the bladder. *Disease of the generative organs* includes uterine disease (1), ovarian disease (5), and other diseases from the generative organs, male (10), female (2). *Childbirth* includes all the accidents of parturition, except puerperal fevers.

Diseases of the bones and joints includes disease of the spinal column, but not, of course, such diseases as spinal sclerosis, which are now referred to disease of the nervous system. A comparison of mortality previous to 1890 is difficult, as the term spinal disease was used to include both diseases of the spinal column and of the spinal marrow. *Abscess* (45) includes cellulitis (0), phlegmon (0), carbuncle (2). *Injury* includes deaths from accident or negligence, homicide, suicide, and execution. *All other causes* includes one death which cannot be classed under any of the groups.

TABLE D.

Shewing death-rates from certain causes for the years 1890-1-2-3-4, the average of those years, and the corresponding rates for the year 1895.

	SEVEN COMMON ZYMOTICS.												
	Small-pox.	Measles.	Scarlatina.	Diphtheria.	Whooping cough.	"Fever"	Diarrhoea.	All seven.	Croup (membranous and undefined).	Phthisis.	Influenza and diseases of the air-passages other than consumption.		
1890 (53wks.)	0.00	0.27	0.28	0.07	0.50	0.30	0.98	2.39	0.09	1.66	5.62		
1891 (52wks.)	0.00	0.71	0.18	0.04	0.41	0.20	0.86	2.41	0.08	1.79	6.11		
1892 (52wks.)	0.02	0.20	0.20	0.08	0.42	0.17	1.10	2.18	0.13	1.42	4.56		
1893 (52wks.)	0.08	0.90	0.08	0.15	0.44	0.30	1.60	3.55	0.18	1.70	4.60		
1894 (52wks.)	0.01	0.75	0.13	0.15	0.34	0.14	0.45	1.98	0.17	1.49	3.64		
<i>Death-rate for 261 weeks.</i>	0.02	0.57	0.17	0.10	0.42	0.22	0.99	2.50	0.13	1.61	4.89		
1895.	....	0.35	0.13	0.10	0.29	0.22	1.58	2.65	0.12	1.55	4.34		

TABLE E, Part I.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the fifty-two weeks ended 28th December, 1895. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the re-estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	Zymotics.
North	2343	38·3	1381	22·60	3·2
West	2166	25·6	1675	19·83	2·2
South-East	1180	35·1	836	24·85	3·4
Hunslet	2190	35·0	1314	20·97	3·4
Holbeck	916	36·3	587	23·25	3·4
Wortley	1662	31·0	1054	19·68	2·5
Kirkstall	1039	29·4	561	15·86	1·9
Bramley	468	29·7	273	17·31	1·6
Chapeltown	500	23·4	250	11·69	1·2
Osmondthorpe	14	32·6	3	6·98	...
<i>Outsiders</i>	...	...	167	...	...
Totals	12,478	31·7	8,101	20·6	2·7

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows :—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central	488	21·6	Mill Hill	175	19·9		
North	570	16·9	West	552	22·4		
North-East	589	23·7	North-West	554	18·5		
East	631	24·1	Brunswick	411	17·7		
South	389	23·1	New Wortley	400	20·7		
East Hunslet	610	22·6	Armley	585	19·3		
West Hunslet	512	18·8	Bramley	343	17·4		
Holbeck	555	23·8	Headingley	570	15·6		

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. These are referred to the institution in Table A, part 2. There was no death at Manston Hospital during the year.

TABLE E, Part 2.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 30th March, 1895. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	7 Zymotics.
North	620	38·7	402	25·1	1·8
West	559	25·6	533	24·4	1·9
South-East ...	319	36·7	256	29·5	1·6
Hunslet	559	35·5	373	23·7	1·1
Holbeck	234	37·8	194	31·4	1·6
Wortley	447	33·5	307	23·0	1·4
Kirkstall	273	31·5	170	19·6	1·7
Bramley	118	28·9	72	17·6	0·7
Chapelton ...	121	31·2	80	20·7	1·3
Osmondthorpe ...	4	37·3	...	...	...
<i>Outsiders</i>	...	...	50	...	...
Totals	3,254	33·0	2,437	24·7	1·6

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows :—

Wards.	Deaths.	Death Rate.	Wards.	Deaths.	Death Rate.
Eastern Division.			Western Division.		
Central	143	24·0	Mill Hill... ..	56	24·4
North	155	21·4	West	174	27·2
North-East	183	29·7	North-West	176	22·8
East	192	28·5	Brunswick	138	23·5
South	114	26·1	New Wortley	104	20·7
East Hunslet	169	23·7	Armley	179	23·5
West Hunslet	158	24·6	Bramley	96	19·1
Holbeck	176	32·2	Headingley	174	19·0

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There was no death at Manston Hospital during this quarter.

TABLE E, Part 3.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 29th June, 1895. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	7 Zymotics.
North	585	<i>36·5</i>	286	<i>17·8</i>	<i>1·7</i>
West	590	<i>27·1</i>	373	<i>17·1</i>	<i>1·1</i>
South-East ...	311	<i>35·8</i>	167	<i>19·2</i>	<i>0·8</i>
Hunslet	538	<i>34·1</i>	251	<i>15·9</i>	<i>0·6</i>
Holbeck	270	<i>43·7</i>	129	<i>20·9</i>	<i>1·0</i>
Wortley	413	<i>30·9</i>	221	<i>16·5</i>	<i>0·5</i>
Kirkstall	237	<i>27·3</i>	108	<i>12·5</i>	<i>0·5</i>
Bramley	122	<i>29·9</i>	79	<i>19·3</i>	<i>0·2</i>
Chapelton	116	<i>29·9</i>	57	<i>14·7</i>	<i>1·3</i>
Osmondthorpe ...	4	<i>37·2</i>	2	<i>18·6</i>	...
<i>Outsiders</i>	...	...	49	...	...
Totals	3,186	<i>32·3</i>	1,722	<i>17·5</i>	<i>0·9</i>

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows :—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central	120	20·1	Mill Hill	37	16·1		
North	118	16·3	West	119	18·6		
North-East	105	17·0	North-West	118	15·3		
East	141	21·0	Brunswick	101	17·2		
South	76	17·4	New Wortley	73	14·6		
East Hunslet	105	14·7	Armley	133	17·5		
West Hunslet	100	15·6	Bramley	95	18·9		
Holbeck	122	22·3	Headingley	110	12·0		

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There was no death at Manston Hospital during this quarter.

TABLE E, Part 4.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 28th September, 1895. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	Zymotics.
North	550	<i>34·3</i>	367	<i>22·9</i>	<i>7·0</i>
West	528	<i>24·2</i>	397	<i>18·2</i>	<i>4·4</i>
South-East ...	272	<i>31·3</i>	221	<i>25·4</i>	<i>7·7</i>
Hunslet	550	<i>34·9</i>	371	<i>23·5</i>	<i>7·7</i>
Holbeck	223	<i>36·1</i>	157	<i>25·4</i>	<i>9·5</i>
Wortley	394	<i>29·5</i>	259	<i>19·4</i>	<i>5·3</i>
Kirkstall	272	<i>31·4</i>	147	<i>17·0</i>	<i>3·5</i>
Bramley	117	<i>28·6</i>	60	<i>14·7</i>	<i>2·2</i>
Chapelton	155	<i>40·0</i>	60	<i>15·5</i>	<i>3·4</i>
Osmondthorpe ...	3	<i>27·9</i>	...	...	...
<i>Outsiders</i>	...	...	35	...	...
Totals	3,064	<i>31·1</i>	2,074	<i>21·0</i>	<i>5·9</i>

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows :—

Wards.	Deaths.	Death Rate.	Wards.	Deaths.	Death Rate.
Eastern Division.			Western Division.		
Central	125	21·0	Mill Hill	36	15·7
North	151	20·9	West	149	23·3
North-East	154	25·0	North-West	125	16·2
East	162	24·1	Brunswick	92	15·6
South	115	26·4	New Wortley	110	21·9
East Hunslet	169	23·7	Armley	133	17·5
West Hunslet	140	21·8	Bramley	76	15·1
Holbeck	155	28·4	Headingley	147	16·1

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There was no death at Manston Hospital during this quarter.

TABLE E, Part 5.

The following Births and Deaths were recorded in the several Sub-Registration Districts of the City of Leeds during the thirteen weeks ended 28th December, 1895. The figures in italics after the Births and Deaths give the proportion per annum per 1,000 of the estimated population.

Districts.	Births.	Birth Rate.	Deaths.	Death Rate.	
				All causes.	Zymotics.
North	588	<i>36·7</i>	326	<i>20·3</i>	<i>2·1</i>
West	489	<i>22·4</i>	372	<i>17·1</i>	<i>1·9</i>
South-East	278	<i>32·0</i>	192	<i>22·1</i>	<i>3·3</i>
Hunslet	543	<i>34·5</i>	319	<i>20·2</i>	<i>4·2</i>
Holbeck	189	<i>30·6</i>	107	<i>17·3</i>	<i>1·9</i>
Wortley	408	<i>30·6</i>	267	<i>20·0</i>	<i>3·1</i>
Kirkstall	257	<i>29·7</i>	136	<i>15·7</i>	<i>2·1</i>
Bramley	111	<i>27·2</i>	62	<i>15·2</i>	<i>2·9</i>
Chapeltown	108	<i>27·9</i>	53	<i>13·7</i>	<i>1·0</i>
Osmondthorpe	3	<i>27·9</i>	1	<i>9·3</i>	...
<i>Outsiders</i>	...	...	33	...	...
Totals	2,974	<i>30·2</i>	1,868	<i>19·0</i>	<i>2·6</i>

Considered as occurring in the Municipal Wards, the foregoing Deaths are classed as follows :—

Wards.		Deaths.	Death Rate.	Wards.		Deaths.	Death Rate.
Eastern Division.				Western Division.			
Central	...	100	16·8	Mill Hill	..	46	20·1
North	...	146	20·2	West	...	110	17·2
North-East	...	147	23·9	North-West	...	135	17·5
East	...	136	20·2	Brunswick	...	80	13·6
South	...	84	19·2	New Wortley	...	113	22·5
East Hunslet	...	167	23·4	Armley	...	140	18·4
West Hunslet	...	114	17·7	Bramley	...	76	15·1
Holbeck	...	102	18·7	Headingley	...	139	15·2

In both these tables deaths occurring in public institutions have been referred to the districts to which the patients belonged. The births in workhouses are included in those of the districts in which these institutions are situated. There was no death at Manston Hospital during this quarter.

TABLE F.

Showing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death Rates from certain causes in Leeds; with the Birth and Death Rates from all causes in the 33 large English towns for each of the thirteen weeks ended March 30th, 1895.

1895.		JANUARY.					FEBRUARY.				MARCH.				TOTALS OR AVERAGES.
		Jan. 5th.	Jan. 12th.	Jan. 19th.	Jan. 26th.	Feb. 2nd.	Feb. 9th.	Feb. 16th.	Feb. 23rd.	Mar. 2nd.	Mar. 9th.	Mar. 16th.	Mar. 23rd.	Mar. 30th.	
Total births	1	260	219	241	274	249	240	277	264	250	218	288	255	219	3,254
Total deaths	2	183	170	189	154	154	134	211	160	180	208	258	245	191	2,437
Under 1 year	3	39	43	39	29	26	27	37	28	50	51	57	61	44	531
1 to 2 years	4	20	20	20	12	22	8	17	11	19	25	24	26	17	241
2 to 5 years	5	25	11	13	8	14	8	17	8	13	6	9	12	9	153
5 to 60 years	6	57	58	72	51	64	56	72	59	52	66	82	78	65	832
60 yrs. and upwards	7	42	38	45	54	28	35	68	54	46	60	86	68	56	680
Deaths : Small-pox	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	9	17	10	11	7	4	1	4	3	5	7	5	5	3	82
Scarlet fever	10	.....	1	.....	1	1	1	.....	1	1	.....	1	.....	.....	7
Diphtheria	11	4	1	.....	1	1	1	1	4	1	2	2	5	1	24
Whooping-cough	12	3	1	3	1	3	.....	1	1	2	1	2	2	.....	20
{ Typhus fever	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
{ Enteric fever	14	.....	3	1	.....	.....	1	.....	.....	.....	.....	1	1	.....	7
{ Other or doubtful	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhœa or dysent.	16	1	2	1	.....	1	1	1	1	1	3	1	.....	.....	13
All seven	17	25	18	16	10	10	5	7	10	10	13	12	13	4	153
Cholera	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Croup	19	.....	.....	.....	.....	.....	2	.....	.....	1	.....	.....	1	.....	4
Dis. of resp. system	20	31	46	48	34	41	42	52	42	63	72	106	104	70	751
Influenza	21	.....	1	.....	.....	.....	.....	.....	.....	1	7	22	21	13	65
Phthisis	22	13	13	10	12	12	9	21	13	8	14	21	12	19	177
Dis. of circul. system	23	16	13	17	18	14	9	12	19	10	19	12	16	15	190
Violent deaths.....	24	14	6	6	4	6	5	16	2	6	6	7	1	3	82
Inquest cases	25	28	10	22	13	12	13	29	11	26	15	18	7	12	216
Deaths in Pub. Inst.	26	23	21	23	14	19	10	22	21	16	16	12	25	21	243
*Dispensary : visits pd	27	241	301	388	352	389	347	483	429	501	481	563	589	444	5,508
Cases admitted to our hospitals	28	7	10	25	4	9	5	4	13	6	6	15	14	7	125
Barom. (inches)	29	29.63	29.63	29.05	29.42	29.97	29.83	29.98	30.15	29.64	29.55	29.79	29.75	28.87	29.63
Attached ther. °F. ...	30	38.77	34.85	40.69	41.00	36.77	34.77	35.15	41.69	43.46	43.00	46.38	51.01	46.62	41.09
Dry bulb	31	34.85	28.69	36.53	34.92	31.24	26.77	29.15	38.24	39.08	39.47	45.15	50.46	44.54	36.84
Wet bulb.....	32	32.77	27.69	35.46	32.86	30.85	25.68	27.92	35.46	35.92	37.69	41.62	46.23	41.46	34.74
Humidity.....	33	79.69	81.37	88.64	79.31	89.20	74.38	74.57	77.52	73.08	78.85	76.08	72.77	79.15	78.82
Mn. of highest reading	34	37.14	31.71	38.00	37.86	33.43	30.00	33.00	41.00	43.00	41.71	51.29	55.29	48.14	40.12
„ lowest „	35	31.00	24.71	32.57	31.86	22.86	22.00	20.29	31.58	33.14	31.86	37.14	41.43	39.14	30.74
„ daily range ...	36	6.14	7.00	5.43	6.00	10.57	8.00	12.71	9.42	9.86	9.85	14.15	13.86	9.00	9.38
Total rainfall (inches)	37	0.20	0.49	1.94	0.93	0.42	0.03	.....	0.03	0.18	0.66	0.05	0.30	1.04	6.27
Wind {direction ...	38	NW	N	SE	NENW	NE	NW SE	NW NE	NW	NW	NW SE	SW NW	NW	NW SW	.....
{force 0-6 ..	39	1.4	1.0	1.1	1.4	1.1	1.1	1.1	1.0	1.4	1.2	1.0	1.2	1.4	1.2
Amount of cloud 0-10	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth rate (Leeds) ..	41	34.3	28.9	31.8	36.1	32.8	31.7	36.5	34.8	33.0	28.8	38.0	33.6	28.9	33.0
Death rate (Leeds)...	42	24.1	22.4	24.9	20.3	20.3	17.7	27.8	21.1	23.7	27.4	34.0	32.3	25.2	24.7
„ (33 towns)	43	18.9	20.1	21.7	18.7	19.7	20.7	26.7	29.6	32.9	35.0	32.2	27.7	23.4	25.2
Birth rate (33 towns)	44	36.5	34.8	33.5	33.7	31.4	33.9	34.3	33.8	32.9	32.6	34.1	33.0	31.1	33.5
D.R. lung dis. (Leeds)	45	4.1	6.1	6.3	4.5	5.4	5.5	6.9	5.5	8.3	9.5	14.0	13.7	9.2	7.62
D.R. influenza „	46	.....	0.1	.....	.....	.....	.....	.....	.....	0.1	0.9	2.9	2.8	1.7	0.66

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent me by Mr. Crowther. They are uncorrected readings made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs.

The corrected humidity in Mr. Glaisher's report for the quarter is, for the calendar month of January, 87; February, 77; March, 82. Average, 82.

The above humidities are calculated on 143 observations instead of 169. Owing to the wet bulb having been frozen the readings taken then are not reliable.

* Altered from last year's tables, which showed new ordinary patients.

Fever death in line 14, March 23rd, should be in line 15, and corresponding alteration in total column. The total for the year is unaffected.

TABLE F. (*continued*).

Showing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death Rates from certain causes in Leeds; with the Birth and Death Rates from all causes in the 33 large English towns for each of the thirteen weeks ended June 29th, 1895.

1895.		APRIL.				MAY.					JUNE.				TOTALS OR AVERAGES.
		April 6th.	April 13th.	April 20th.	April 27th.	May 4th.	May 11th.	May 18th.	May 25th.	June 1st.	June 8th.	June 15th.	June 22nd.	June 29th.	
Total births	1	239	243	254	236	240	247	238	242	249	212	270	262	254	3,186
Total deaths	2	167	145	158	130	134	140	119	133	133	103	111	133	116	1,722
Under 1 year	3	38	28	49	43	38	35	14	29	31	20	31	39	29	424
1 to 2 years	4	15	11	10	13	13	11	6	11	15	10	4	9	13	141
2 to 5 years	5	6	9	8	8	5	7	8	4	7	2	10	3	4	81
5 to 60 years	6	61	59	57	37	50	58	54	50	48	41	45	50	41	657
60 yrs. and upwards	7	47	38	34	29	28	29	37	33	32	30	21	32	29	419
Deaths: Small-pox	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	9	2	1	3	1	.....	1	1	.....	1	.....	.....	1	1	12
Scarlet fever	10	.....	2	.....	.....	.....	2	.....	.....	.....	.....	.....	1	.....	5
†Diphtheria	11	.....	2	.....	1	3	.....	3	.....	3	.....	2	1	.....	15
Whooping-cough	12	.....	.....	3	4	.....	3	1	1	4	.....	2	.....	.....	18
{ Typhus fever	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
{ Enteric fever	14	.....	.....	.....	.....	.....	1	.....	1	1	1	1	.....	1	6
{ Other or doubtful	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoea or dysent.	16	1	1	1	.....	.....	2	.....	4	1	2	3	5	7	27
All seven	17	3	6	7	6	3	9	5	6	10	3	8	8	9	83
Cholera	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Croup	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	1	1	4
Dis. of resp. system	20	62	37	41	33	30	25	28	28	24	22	24	23	17	394
Influenza	21	6	8	8	4	3	2	2	.....	1	.....	.....	1	.....	35
Phthisis	22	10	20	13	12	11	10	16	12	18	9	13	12	16	172
Dis. of circul. system	23	10	13	8	9	12	14	17	10	8	4	5	9	6	125
Violent deaths.....	24	9	5	9	2	1	3	3	5	11	2	7	6	3	66
Inquest cases	25	20	11	18	8	6	6	12	11	13	8	11	12	9	145
Deaths in Pub. Inst.	26	22	19	26	10	24	26	20	15	19	16	15	12	13	237
*Dispensary: visits pd	27	415	421	196	481	398	417	399	340	355	268	434	330	436	4,890
Cases admitted to our own hospitals	28	3	12	3	10	5	11	8	11	11	8	8	11	13	114
Barom. (inches)	29	29.67	29.81	29.75	29.43	30.17	30.07	29.83	29.72	29.89	30.12	29.93	29.82	29.94	29.86
Attached ther. °F. ...	30	46.38	50.25	50.00	54.62	52.38	56.69	56.46	53.69	62.46	62.08	60.00	58.15	64.46	55.97
Dry bulb	31	44.54	51.67	51.39	54.84	54.62	62.77	55.62	54.46	69.62	63.77	59.23	62.31	67.46	57.88
Wet bulb	32	40.00	44.83	46.15	49.54	48.23	54.23	49.38	49.08	59.46	57.38	50.69	53.61	60.00	50.98
Humidity.....	33	69.00	59.83	68.85	70.08	64.62	57.92	64.38	69.46	54.15	68.00	55.62	56.23	63.85	63.25
Mn. of highest reading	34	47.57	55.43	57.00	56.71	59.14	70.00	59.57	57.71	74.14	70.00	64.43	66.00	73.43	62.41
„ lowest „	35	36.29	40.57	39.71	47.14	42.87	43.86	44.14	44.57	51.43	52.29	47.57	46.29	54.00	45.44
„ daily range ...	36	11.28	14.86	17.29	9.57	16.27	26.14	15.43	13.14	22.71	17.71	16.86	19.71	19.43	16.97
Total rainfall (inches)	37	0.22	.....	0.27	1.08	0.23	0.01	0.07	0.13	1.13	0.02	0.08	0.02	1.60	4.86
Wind {direction ...	38	NENW	SWNW	NENW	SW	SWNE	NE	NW	NWSW	SE	NE	NWNE	SW	SENE	.....
{force 0-6 ..	39	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Amount of cloud 0-10	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth rate (Leeds) ...	41	31.5	32.1	33.5	31.1	31.7	32.6	31.4	31.9	32.8	28.0	35.6	34.6	33.5	32.2
Death rate (Leeds)...	42	22.0	19.1	20.8	17.1	17.7	18.5	15.7	17.5	17.5	13.6	14.6	17.5	15.3	17.5
„ (33 towns)	43	21.1	20.5	20.3	18.9	17.5	17.7	17.6	17.4	17.2	15.5	15.4	16.2	16.7	17.8
Birth rate (33 towns)	44	32.6	30.1	31.6	33.2	34.0	32.0	30.4	31.7	31.4	26.8	33.8	32.5	30.4	31.5
D.R. lung dis. (Leeds)	45	8.2	4.9	5.4	4.4	4.0	3.3	3.7	3.7	3.2	2.9	3.2	3.0	2.2	4.0
D.R. influenza „	46	0.8	1.1	1.1	0.5	0.4	0.3	0.3	.....	0.1	.....	.....	0.1	.....	0.4

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading. The meteorological data are compiled from returns sent me by Mr. Crowther. They are uncorrected readings made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs. The corrected humidity in Mr. Glaisher's report for the quarter is, for the calendar month of April, 72; May, 64; June, 66. Average, 67.

* Altered from last year's tables, which showed new ordinary patients. † Including Membranous Croup.

TABLE F (continued).

Showing Births, Deaths, from all and certain causes, visits to home patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death Rates from certain causes in Leeds; with the Birth and Death Rates from all causes in the 33 large English towns for each of the thirteen weeks ended September 28th, 1895.

1895.		JULY.					AUGUST.				SEPTEMBER.				TOTALS AND AVERAGES.
		July 6th.	July 13th.	July 20th.	July 27th.	Aug. 3rd.	Aug. 10th.	Aug. 17th.	Aug. 24th.	Aug. 31st.	Sept. 7th.	Sept. 14th.	Sept. 21st.	Sept. 28th.	
Total births	1	237	228	227	239	278	224	224	237	202	248	247	258	215	3,064
Total deaths	2	149	159	199	182	154	155	140	133	150	163	155	167	168	2,074
Under 1 year	3	66	62	97	88	64	68	61	55	70	73	76	63	64	907
1 to 2 years	4	8	14	17	11	12	12	9	14	17	17	14	18	29	192
2 to 5 years	5	9	6	3	9	9	5	3	4	6	8	5	8	10	85
5 to 60 years	6	43	46	59	45	43	38	46	33	38	45	36	47	44	563
60 yrs. and upwards	7	23	31	23	29	26	32	21	27	19	20	24	31	21	327
Deaths: small-pox	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	9	2	1	1	1	1	.....	.....	.....	2	.....	.....	.....	2	10
Scarlet fever	10	2	.....	1	2	3	2	.....	.....	2	1	2	1	2	18
Diphtheria	11	3	.....	.....	2	.....	1	.....	1	.....	4	1	1	1	14
Whooping-cough	12	.....	.....	5	.....	2	4	.....	3	2	2	4	2	1	25
Typhus fever	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enteric fever	14	2	.....	1	.....	2	4	.....	2	2	2	2	2	3	22
Other or doubtful	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoea or dysent.	16	28	40	57	46	33	32	33	32	37	34	42	37	38	489
All seven	17	37	41	65	51	41	43	33	38	45	43	51	43	47	578
Cholera	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Croup	19	.....	2	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	1	4
Dis. of resp. system	20	19	16	10	19	15	11	21	12	6	12	9	13	24	187
Influenza	21	1	.....	1	.....	.....	.....	.....	1	.....	1	1	1	1	7
Phthisis	22	15	18	16	9	11	7	12	5	9	8	8	12	5	135
Dis. of circul. system	23	3	11	11	8	5	9	9	8	7	7	9	11	5	103
Violent deaths.....	24	12	4	4	9	6	2	6	1	1	2	3	6	4	60
Inquest cases	25	14	9	12	17	16	8	11	8	5	7	12	13	8	140
Deaths in Pub. Inst.	26	20	16	15	14	16	13	8	7	16	18	15	20	10	188
*Dispensary: visitspd	27	162	184	194	157	149	135	176	166	156	148	141	122	129	2,019
Cases admitted to our own hospitals	28	17	22	27	12	14	15	18	16	23	17	20	27	25	253
Barom. (inches)	29	29.81	29.76	29.58	29.58	29.68	29.47	29.81	29.83	29.83	29.85	29.87	30.05	30.10	29.79
Attached ther. °F. ...	30	63.23	64.15	62.77	62.15	63.23	62.38	64.15	67.00	64.38	63.62	62.08	59.77	60.62	63.04
Dry bulb	31	63.54	65.77	62.00	62.08	62.23	65.08	65.85	68.62	63.54	64.54	62.92	60.62	65.69	64.04
Wet bulb	32	56.69	56.62	57.08	57.23	55.77	57.00	59.23	61.00	57.62	59.00	57.00	54.32	60.38	57.61
Humidity.....	33	65.08	57.08	73.08	74.23	65.54	59.54	66.46	62.46	68.46	70.62	68.08	70.46	73.77	67.30
Mn. of highest reading	34	68.43	69.57	66.43	68.29	66.29	68.71	69.86	73.28	67.14	69.57	67.71	66.27	75.43	69.00
„ lowest „	35	52.29	53.43	54.71	51.14	53.57	53.29	56.29	56.71	55.71	54.13	51.86	51.57	49.57	53.41
„ daily range ...	36	16.14	16.14	11.72	17.15	12.72	15.42	13.57	16.57	11.43	15.44	15.85	14.70	25.86	15.59
Total rainfall (inches)	37	1.04	0.38	1.43	4.20	.05	0.58	0.61	0.08	0.50	1.08	0.05	.....	.....	10.00
Wind {direction ...	38	NW	SW	SW	NW	SESW	NWSW	SWSE	NWSW	SW	SWNW	SWNW	SWNW	SE	.....
{force 0-6 ..	39	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.00
Amount of cloud 0-10	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth rate (Leeds) ..	41	31.3	30.1	29.9	31.5	36.7	29.5	29.5	31.3	26.6	32.7	32.6	34.0	28.4	31.1
Death rate (Leeds)...	42	19.7	21.0	26.3	24.0	20.3	20.4	18.5	17.5	19.8	21.5	20.4	22.0	22.1	21.0
„ (33 towns)	43	17.5	19.9	21.9	22.5	20.7	20.8	19.1	19.9	19.9	19.9	19.3	19.8	21.0	20.1
Birth rate (33 towns)	44	31.6	31.5	30.9	31.3	32.8	28.7	32.1	30.7	31.1	31.2	30.3	30.9	30.9	31.1
D.R. lung dis. (Leeds)	45	2.5	2.1	1.3	2.5	2.0	1.5	2.8	1.6	0.8	1.6	1.2	1.7	3.2	1.9
D.R. diarrhoea „	46	3.7	5.3	7.5	6.1	4.4	4.2	4.4	4.2	4.9	4.5	5.5	4.9	5.0	5.9

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent me by Mr. Crowther. They are uncorrected readings made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs.

The corrected humidity in Mr. Glaisher's report for the quarter is, for the calendar month of July, 72; August, 69; September, 77. Average, 73.

* Altered from last year's tables, which showed new ordinary patients

TABLE F. (continued.)

Showing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death Rates from certain causes in Leeds; with the Birth and Death Rates from all causes in the 33 large English towns for each of the thirteen weeks ended December 28th, 1895, and the totals for the year 1895.

1895.		OCTOBER.					NOVEMBER.				DECEMBER.				TOTALS OR AVERAGES.	YEAR.
		Oct. 5th.	Oct. 12th.	Oct. 19th.	Oct. 26th.	Nov. 2nd.	Nov. 9th.	Nov. 16th.	Nov. 23rd.	Nov. 30th.	Dec. 7th.	Dec. 14th.	Dec. 21st.	Dec. 28th.		
Total births	1	240	238	263	259	235	255	237	224	230	203	195	233	162	2,974	12,478
Total deaths	2	137	164	129	158	153	160	125	135	139	138	132	142	156	1,868	8,101
Under 1 year	3	56	52	39	54	30	51	37	34	29	37	29	33	41	522	2,384
1 to 2 years	4	13	13	14	15	17	17	10	19	14	14	9	15	14	184	758
2 to 5 years	5	5	17	6	12	13	10	9	5	9	10	12	14	13	135	454
5 to 60 years	6	39	59	41	40	56	53	44	59	55	46	47	47	57	643	2,695
60 yrs. and upwards	7	24	23	29	37	37	29	25	18	32	31	35	33	31	384	1,810
Deaths : Small-pox	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	9	1	2	.....	1	.....	5	4	3	4	3	.....	4	5	32	136
Scarlet fever	10	1	3	.....	1	3	2	1	2	1	2	3	1	2	22	52
*Diphtheria	11	1	3	.....	2	2	4	.....	.....	2	.....	1	.....	.....	15	57
Whooping-cough	12	.....	2	1	1	1	2	4	2	10	7	6	12	2	50	113
{ Typhus fever	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
{ Enteric fever	14	3	3	4	7	6	4	2	6	3	3	4	4	2	51	85
{ Other or doubtful	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Diarrhoea or dysent.	16	24	22	15	10	1	9	2	3	1	2	.....	2	1	92	621
All seven	17	30	35	20	22	13	26	13	16	21	17	14	23	12	262	1,065
Cholera	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Croup	19	.....	.....	1	.....	.....	1	.....	.....	.....	.....	.....	2	1	5	28
Dis. of resp. system	20	17	20	23	33	34	34	28	36	29	33	29	27	34	377	1,709
Influenza	21	.....	.....	.....	.....	.....	.....	1	1	2	.....	2	2	.....	8	115
Phthisis	22	11	9	7	7	9	9	12	6	15	7	8	13	14	127	611
Dis. of circul. system	23	8	4	8	13	7	8	8	9	7	14	11	13	12	122	540
Violent deaths.....	24	4	6	2	4	5	6	5	9	5	6	6	8	5	71	279
Inquest cases	25	14	13	7	11	9	15	13	17	14	15	11	14	9	162	663
Deaths in Pub. Inst.	26	18	23	12	18	20	15	9	15	17	14	17	17	18	213	882
†Dispensary : visits pd	27	170	214	187	191	186	204	228	237	266	281	244	220	189	2,817	15,234
Cases admitted to our hospitals	28	24	22	13	23	24	20	28	16	20	25	23	12	9	259	751
Barom. (inches)	29	29.45	29.51	30.08	29.53	29.84	29.55	29.22	29.92	29.84	29.48	29.56	29.50	29.76	29.63	29.73
Attached ther. °F. ...	30	57.23	53.31	52.00	44.92	44.15	51.00	51.23	49.38	48.69	48.46	43.69	44.31	42.25	48.51	52.02
Dry bulb	31	54.31	52.38	48.92	40.15	41.62	48.23	49.46	44.92	44.77	43.77	41.23	39.31	34.58	44.90	50.36
Wet bulb	32	51.38	48.00	45.85	37.62	39.31	46.00	46.46	42.92	43.00	40.77	39.08	37.54	32.67	42.35	46.42
Humidity.....	33	81.38	73.77	79.84	80.08	81.46	84.46	79.92	85.38	87.00	77.92	82.85	85.38	80.67	81.55	72.72
Mn. of highest reading	34	61.71	55.13	53.00	45.00	45.29	51.14	53.57	48.29	46.14	46.14	44.43	41.29	35.71	48.22	54.93
„ lowest „	35	47.29	46.14	43.14	34.29	34.57	43.29	43.00	39.71	41.14	40.29	34.43	36.00	31.00	39.56	42.28
„ daily range ...	36	14.42	8.99	9.86	10.71	10.72	7.85	10.57	8.58	5.00	5.85	10.00	5.29	4.71	8.66	12.65
Total rainfall (inches)	37	1.42	0.87	0.47	0.45	0.11	0.72	0.93	0.70	0.75	0.81	0.83	0.03	0.70	8.79	29.92
Wind {direction ...	38	SW	NW SW	NW NE	NW	NENW	SW	SW	SESW	NE NW	NW	NW SW	NE SE	SE	.....	.....
{force 0-6 ..	39	1.5	1.4	1.0	1.0	0.9	1.1	1.3	1.0	1.0	1.7	1.3	1.0	1.1	1.2	1.1
Amount of cloud 0-10	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth rate (Leeds) ..	41	31.7	31.4	34.7	34.2	31.0	33.6	31.3	29.5	30.3	26.8	25.7	30.7	21.4	30.2	31.7
Death rate (Leeds)...	42	18.1	21.6	17.0	20.8	20.2	21.1	16.5	17.8	18.3	18.2	17.4	18.7	20.6	19.0	20.6
„ (33 towns)	43	19.4	21.0	19.1	19.7	21.9	22.1	19.1	19.0	17.9	17.9	17.8	18.6	19.1	19.4	20.7
Birth rate (33 towns)	44	29.2	32.0	32.2	30.1	32.2	30.7	31.0	31.1	27.7	28.5	27.4	29.2	19.6	29.3	31.3
D.R. resp. sys. (Leeds)	45	2.2	2.6	3.0	4.4	4.5	4.5	3.7	4.7	3.8	4.4	3.8	3.6	4.5	3.8	4.3
D.R. diarrhoea ..	46	3.2	2.9	2.0	1.3	0.1	1.2	0.3	0.4	0.1	0.3	.....	0.3	0.1	0.9	1.6

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading.

The meteorological data are compiled from returns sent me by Mr. Crowther. They are uncorrected readings made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs.

The corrected humidity in Mr. Glaisher's report for the quarter is, for the calendar month of October, 80; November, 85; December, 83. Average, 83.

* Including Membranous Croup.

† Altered from last year's tables, which showed new ordinary patients.

TABLE F.

Showing Births, Deaths, from all and certain causes, Home Patients of the Dispensary, admissions to the Fever Hospitals, and some of the Meteorological conditions and the Death Rates from certain causes in Leeds; with the Birth and Death Rates from all causes in the 33 large English towns for each of the thirteen weeks ended March 28th, 1896.

1896.		JANUARY.					FEBRUARY.				MARCH.				TOTALS OR AVERAGES.
		Jan. 4th.	Jan. 11th.	Jan. 18th.	Jan. 25th.	Feb. 1st.	Feb. 8th.	Feb. 15th.	Feb. 22nd.	Feb. 29th.	Mar. 7th.	Mar. 14th.	Mar. 21st.	Mar. 28th.	
Total births	1	246	210	209	228	211	208	241	210	230	241	222	250	251	2,957
Total deaths	2	145	137	135	144	154	156	147	127	143	132	176	139	136	1,871
Under 1 year	3	40	32	40	40	33	39	26	31	38	27	42	42	28	458
1 to 2 years	4	9	14	12	8	17	20	23	12	13	11	23	10	17	189
2 to 5 years	5	13	15	13	12	15	10	16	5	19	11	14	5	11	159
5 to 60 years	6	54	51	46	53	51	50	53	47	49	42	60	52	47	655
60 yrs. and upwards	7	29	25	24	31	38	37	29	32	24	41	37	30	33	410
Deaths: Small-pox	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Measles	9	5	9	7	5	3	4	6	4	10	4	5	1	3	66
Scarlet fever	10	.....	2	.....	1	2	3	2	.....	1	.....	.....	.....	.....	11
*Diphtheria	11	.....	1	.....	2	1	1	5	1	1	1	.....	1	3	17
Whooping-cough	12	8	10	6	4	11	9	10	7	9	6	14	7	5	106
{ Typhus fever	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
{ Enteric fever	14	2	2	1	1	1	1	2	.....	1	.....	.....	3	1	15
{ Other or doubtful	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Diarrhoea or dysent.	16	.....	.....	1	1	.....	.....	2	1	3	3	1	1	.....	13
All seven	17	15	24	15	14	18	18	27	13	25	14	20	13	12	228
Cholera	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Croup	19	.....	1	.....	1	.....	1	.....	.....	1	2	.....	.....	1	7
Dis. of resp. system	20	41	26	35	35	31	29	28	36	28	38	39	32	37	435
Influenza	21	1	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	2
Phthisis	22	8	9	11	14	11	12	15	10	15	11	12	17	10	155
Dis. of circul. system	23	5	11	11	9	12	14	9	11	9	11	12	11	11	136
Violent deaths...	24	8	9	5	8	9	8	1	2	1	2	6	3	7	69
Inquest cases	25	22	17	14	13	18	13	11	10	8	6	17	12	11	172
Deaths in Pub. Inst.	26	16	16	19	17	25	20	15	9	12	14	29	13	16	221
Dispensary: visits pd	27	287	262	258	241	240	220	256	254	216	257	288	276	283	3,338
Cases admitted to our hospitals	28	17	12	8	13	12	4	17	7	10	7	8	6	10	131
Barom. (inches)	29	29.84	30.50	29.63	30.00	30.41	30.27	30.14	29.91	30.03	29.11	29.83	29.55	29.70	29.92
Attached ther. °F. ...	30	50.00	45.62	46.92	45.08	47.23	48.15	51.00	45.77	41.46	47.00	49.23	48.31	50.38	47.40
Dry bulb	31	48.54	39.15	44.38	41.31	44.00	45.38	47.77	39.77	38.23	44.85	44.23	47.54	48.54	44.13
Wet bulb	32	47.00	37.54	41.69	38.77	40.62	42.92	44.31	37.77	35.62	41.54	41.08	43.69	44.23	41.29
Humidity	33	89.31	86.15	79.92	79.77	76.00	82.15	76.46	82.92	78.08	76.15	77.69	74.31	71.85	79.29
Mn. of highest reading	34	50.29	40.86	46.57	42.57	46.43	48.00	51.00	43.00	41.86	47.71	49.00	52.29	52.71	47.10
„ lowest „	35	43.57	35.00	39.43	34.43	37.29	38.14	41.71	35.29	32.00	38.29	38.00	38.86	40.71	37.90
„ daily range ..	36	6.72	5.86	7.14	8.14	9.14	9.86	9.29	7.71	9.86	9.42	11.00	13.43	12.00	9.20
Total rainfall (inches)	37	0.46	.....	0.36	0.05	0.05	.....	0.04	0.29	0.49	0.98	0.48	0.54	0.74	4.48
Wind {direction ...	38	SE	NW	NW	NW SW	SW	SW	SW	SE	SE	NW SW	NW	SW NW	SW NW	.....
{force 0-6 ..	39	1	1	2	1	1	1	1	1	1	2	1	1	1	1
Amount of cloud 0-10	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birth rate (Leeds) ..	41	31.9	27.2	27.1	29.6	27.4	27.0	31.2	27.2	29.8	31.2	28.8	32.4	32.5	29.5
Death rate (Leeds)...	42	18.8	17.8	17.5	18.7	20.0	20.2	19.1	16.5	18.5	17.1	22.8	18.0	17.6	18.7
Birth rate (33 towns)	43	32.2	30.2	29.0	28.5	29.5	31.1	30.7	28.9	31.1	30.3	32.1	30.8	31.8	30.4
Death rate (33 towns)	44	20.7	18.5	19.7	18.8	18.4	20.5	19.3	19.4	20.0	20.7	20.0	19.2	18.8	19.5
D.R. lung dis. (Leeds)	45	5.3	3.4	4.5	4.5	4.0	3.8	3.6	4.7	3.6	4.9	5.1	4.3	4.8	4.3
D.R. Whpg. cough, ,	46	1.0	1.3	0.8	0.5	1.4	1.2	1.3	0.9	1.2	0.8	1.8	0.9	0.6	1.1

The Dispensary returns are furnished me by the kindness of the resident staff, and have regard to a week ended in each case a day earlier than that given in the heading. The meteorological data are compiled from returns sent me by Mr. Crowther. They are uncorrected readings made at 10 a.m. and 4 p.m. The humidity each week is the average of the humidities calculated on each of the thirteen observations of the wet and dry bulbs.

The corrected humidity in Mr. Glaisher's report for the quarter is, for the calendar month of January, 86; February, 81; March, 79; average, 82. * Including membranous croup, which line 19 does not.

